

15-081-21004

28-30s-33w

**WELL NAME:** Hickman D #2  
**OPERATOR:** Oxy USA Inc  
**LOCATION:** Sec 28 Rge 30S Twp 33W  
Haskell County Kansas  
**DATE:** 03/21/96

TRILOBITE TESTING L.L.C.

OPERATOR : OXY USA Inc. DATE 3-19-96  
 WELL NAME: Hickman D #2 KB 2950.00 ft TICKET NO: 8980 DST #1  
 LOCATION : 28-30S-33W Haskell Cty KS GR 2939.00 ft FORMATION: Marmaton  
 INTERVAL : 4754.00 To 4790.00 ft TD 4790.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

| Mins              | Field  | 1      | 2      | 3   | 4   | TIME DATA-----         |
|-------------------|--------|--------|--------|-----|-----|------------------------|
| PF 30 Rec.        | 11038  | 11038  | 2346   |     |     | PF Fr. 1445 to 1515 hr |
| SI 60 Range(Psi ) | 5075.0 | 5075.0 | 4995.0 | 0.0 | 0.0 | IS Fr. 1515 to 1615 hr |
| SF 60 Clock(hrs)  | AK-1   | AK-1   | Alpin  |     |     | SF Fr. 1615 to 1715 hr |
| FS 120 Depth(ft ) | 4787.0 | 4787.0 | 4763.0 | 0.0 | 0.0 | FS Fr. 1715 to 1915 hr |

|                | Field  | 1      | 2      | 3   | 4   |                               |
|----------------|--------|--------|--------|-----|-----|-------------------------------|
| A. Init Hydro  | 2349.0 | 2263.0 | 2286.0 | 0.0 | 0.0 | T STARTED 1230 hr             |
| B. First Flow  | 243.0  | 233.0  | 204.0  | 0.0 | 0.0 | T ON BOTM 1443 hr             |
| B1. Final Flow | 389.0  | 270.0  | 419.0  | 0.0 | 0.0 | T OPEN 1445 hr                |
| C. In Shut-in  | 1385.0 | 1404.0 | 1407.0 | 0.0 | 0.0 | T PULLED 1915 hr              |
| D. Init Flow   | 507.0  | 522.0  | 482.0  | 0.0 | 0.0 | T OUT 2300 hr                 |
| E. Final Flow  | 830.0  | 821.0  | 825.0  | 0.0 | 0.0 |                               |
| F. Fl Shut-in  | 1423.0 | 1440.0 | 1422.0 | 0.0 | 0.0 | TOOL DATA-----                |
| G. Final Hydro | 2259.0 | 2252.0 | 2232.0 | 0.0 | 0.0 | Tool Wt. 1800.00 lbs          |
| Inside/Outside | O      | O      | I      |     |     | Wt Set On Packer 25000.00 lbs |

RECOVERY

Tot Fluid 0.00 ft of 0.00 ft in DC and 0.00 ft in DP  
 Pulled 2 stds. Drop bar  
 Est. 4500 ft. ?

Initial Str Wt 68000.00 lbs  
 Unseated Str Wt 74000.00 lbs  
 Bot Choke 0.75 in  
 Hole Size 7.88 in  
 D Col. ID 2.25 in  
 D. Pipe ID 3.80 in  
 D.C. Length 0.00 ft  
 D.P. Length 4738.00 ft

SALINITY 0.00 P.P.M. A.P.I. Gravity 32.70

BLOW DESCRIPTION

Initial Flow -  
 Strong blow, bottom of bucket in  
 1 min; gas to surface in 5 min  
 Final Flow -  
 Bottom of bucket as tool opened; gas  
 gauged at 6.33 MCF, gas will burn

MUD DATA-----  
 Mud Type Chemical  
 Weight 9.10 lb/c  
 Vis. 48.00 S/L  
 W.L. 7.20 in3  
 F.C. 0.00 in  
 Mud Drop Y 20.0 ft  
 Amt. of fill 0.00 ft  
 Btm. H. Temp. 125.00 F  
 Hole Condition GOOD  
 % Porosity 0.00  
 Packer Size 6.75 in  
 No. of Packers 2  
 Cushion Amt. 0.00  
 Cushion Type  
 Reversed Out Y  
 Tool Chased N  
 Tester Tom Horacek  
 Co. Rep. Tim Hedrick  
 Contr. Val Energy  
 Rig # 1  
 Unit #  
 Pump T.

SAMPLES: Yes  
 SENT TO: Caraway

Test Successful: Y



## NATURAL GAS ANALYSIS REPORT

Sampled by:  
Trilobite Testing, L.L.C.  
Hays, Kansas  
Scott City, Kansas  
Phone: 800-728-5369  
Fax: 913-625-5620

Analyzed by:  
Caraway Analytical, L.L.C.  
728 North Roosevelt  
Liberal, Kansas 67901  
Phone: 316-624-5389  
Fax: 316-626-7108

|              |                   |              |          |
|--------------|-------------------|--------------|----------|
| Lab Number:  | 960162            | Analyzed:    | 03/22/96 |
| Sample From: | Hickman D-2 DST 1 | Pressure:    |          |
| Producer:    | Oxy USA, Inc.     | Temperature: |          |
| Date:        |                   | Location:    | 28-30-33 |
| Time:        |                   | County:      | Haskell  |
| Sampler:     |                   | State:       | Kansas   |
| Source:      |                   | Formation:   | Marmaton |

|                | Mole %     | GPM   |
|----------------|------------|-------|
| Helium         | He: 0.056  | 0.000 |
| Oxygen         | O2: 0.000  | 0.000 |
| Nitrogen       | N2: 4.850  | 0.000 |
| Carbon Dioxide | CO2: 0.533 | 0.000 |
| Methane        | C1: 53.290 | 0.000 |
| Ethane         | C2: 14.722 | 3.937 |
| Propane        | C3: 15.400 | 4.243 |
| Iso Butane     | iC4: 2.290 | 0.749 |
| Normal Butane  | nC4: 5.177 | 1.632 |
| Iso Pentane    | iC5: 1.236 | 0.452 |
| Normal Pentane | nC5: 1.199 | 0.434 |
| Hexanes Plus   | C6+: 1.247 | 0.544 |

|                |                     |        |
|----------------|---------------------|--------|
| TOTAL:         | 100.000             | 11.993 |
| Z Fact:        | 0.9934              |        |
| SP.GR.:        | 0.9948              |        |
| BTU (SAT):     | 1577.4 @ 14.73 psia |        |
| BTU (DRY):     | 1605.3 @ 14.73 psia |        |
| OCTANE RATING: | 108.3               |        |

COMMENTS: No pressure in bottle, sample entered under vacuum 0.025

# TEST HISTORY

8980 DST #1 Hickman D-#2 OXY USA Inc.

## Flag Points

t(Min.) P(PSig)

|    |        |         |
|----|--------|---------|
| A: | 0.00   | 2285.68 |
| B: | 0.00   | 204.02  |
| C: | 28.00  | 419.21  |
| D: | 59.00  | 1407.21 |
| E: | 0.00   | 482.41  |
| F: | 58.00  | 824.50  |
| G: | 122.00 | 1422.23 |
| H: | 0.00   | 2232.22 |

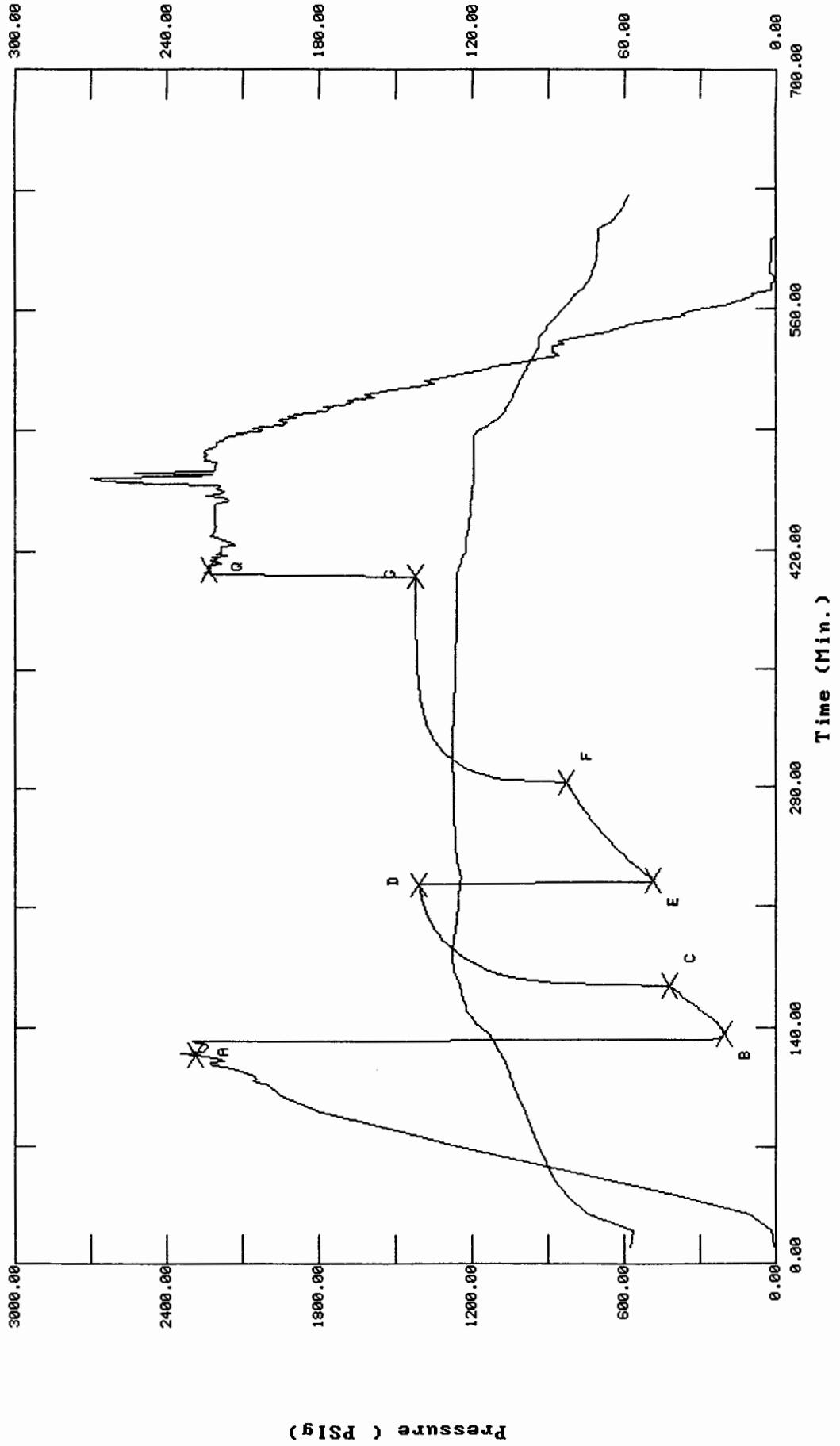
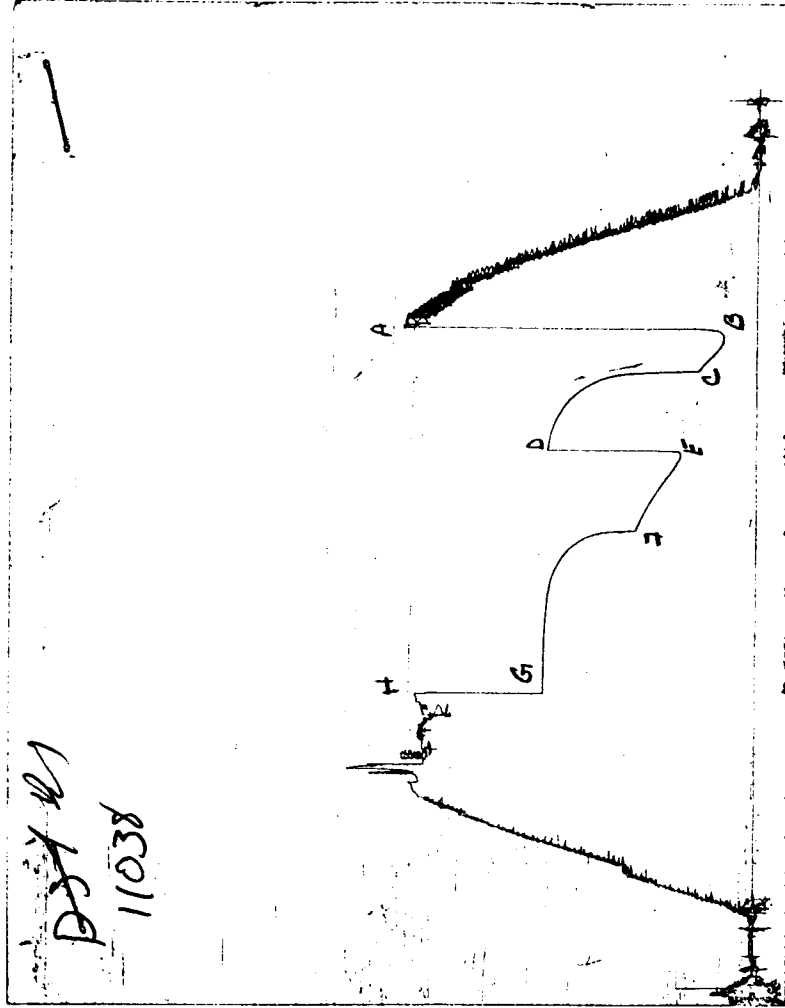


CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8980 DST #1 Hickman D-#2 OXY USA Inc.

DATE: 03/19/96

TIME: 12:42:24

|                      | Time   | Pressure<br>PSIg | delta P<br>PSIg | Temp.<br>DEG F | (T+dT)/dT | P^2/10^6 |
|----------------------|--------|------------------|-----------------|----------------|-----------|----------|
| ***** Initial Hydro. | 124.00 | 2285.7           | 0.0             | 108.27         |           |          |
| ***** Start Flow 1   | 0.00   | 204.0            | 0.0             | 113.27         |           |          |
|                      | 1.00   | 204.3            | 0.3             | 114.02         |           |          |
|                      | 2.00   | 206.6            | 2.6             | 114.83         |           |          |
|                      | 3.00   | 210.6            | 6.5             | 115.59         |           |          |
|                      | 4.00   | 215.4            | 11.4            | 116.41         |           |          |
|                      | 5.00   | 221.4            | 17.4            | 117.16         |           |          |
|                      | 6.00   | 228.1            | 24.1            | 117.87         |           |          |
|                      | 7.00   | 235.3            | 31.3            | 118.53         |           |          |
|                      | 8.00   | 243.3            | 39.3            | 119.12         |           |          |
|                      | 9.00   | 251.5            | 47.5            | 119.69         |           |          |
|                      | 10.00  | 260.2            | 56.1            | 120.22         |           |          |
|                      | 11.00  | 269.0            | 65.0            | 120.72         |           |          |
|                      | 12.00  | 278.1            | 74.1            | 121.17         |           |          |
|                      | 13.00  | 287.4            | 83.4            | 121.65         |           |          |
|                      | 14.00  | 296.8            | 92.8            | 122.11         |           |          |
|                      | 15.00  | 306.1            | 102.1           | 122.11         |           |          |
|                      | 16.00  | 315.4            | 111.4           | 122.11         |           |          |
|                      | 17.00  | 324.6            | 120.6           | 122.19         |           |          |
|                      | 18.00  | 334.8            | 130.8           | 122.72         |           |          |
|                      | 19.00  | 344.9            | 140.8           | 123.04         |           |          |
|                      | 20.00  | 353.6            | 149.6           | 123.29         |           |          |
|                      | 21.00  | 362.0            | 158.0           | 123.51         |           |          |
|                      | 22.00  | 370.4            | 166.3           | 123.69         |           |          |
|                      | 23.00  | 378.4            | 174.4           | 123.88         |           |          |
|                      | 24.00  | 386.8            | 182.8           | 124.09         |           |          |
|                      | 25.00  | 394.8            | 190.8           | 124.21         |           |          |
|                      | 26.00  | 402.9            | 198.9           | 124.36         |           |          |
|                      | 27.00  | 411.0            | 207.0           | 124.49         |           |          |
| ***** End Flow 1     | 28.00  | 419.2            | 215.2           | 124.61         |           |          |
| ***** Start Shutin 1 | 0.00   | 419.2            | 0.0             | 124.61         | 0.0000    | 0.176    |
|                      | 1.00   | 640.0            | 220.8           | 124.76         | 29.0000   | 0.410    |
|                      | 2.00   | 863.1            | 443.9           | 124.99         | 15.0000   | 0.745    |
|                      | 3.00   | 965.1            | 545.9           | 125.35         | 10.3333   | 0.931    |
|                      | 4.00   | 1012.6           | 593.4           | 125.76         | 8.0000    | 1.025    |
|                      | 5.00   | 1045.6           | 626.4           | 126.16         | 6.6000    | 1.093    |
|                      | 6.00   | 1072.5           | 653.3           | 126.46         | 5.6667    | 1.150    |
|                      | 7.00   | 1095.2           | 676.0           | 126.73         | 5.0000    | 1.200    |
|                      | 8.00   | 1115.5           | 696.3           | 126.94         | 4.5000    | 1.244    |
|                      | 9.00   | 1133.8           | 714.6           | 127.10         | 4.1111    | 1.285    |
|                      | 10.00  | 1150.2           | 731.0           | 127.22         | 3.8000    | 1.323    |
|                      | 11.00  | 1165.3           | 746.1           | 127.31         | 3.5455    | 1.358    |
|                      | 12.00  | 1179.4           | 760.2           | 127.41         | 3.3333    | 1.391    |
|                      | 13.00  | 1192.4           | 773.2           | 127.51         | 3.1538    | 1.422    |
|                      | 14.00  | 1204.8           | 785.6           | 127.57         | 3.0000    | 1.451    |
|                      | 15.00  | 1216.4           | 797.1           | 127.63         | 2.8667    | 1.480    |
|                      | 16.00  | 1227.4           | 808.1           | 127.67         | 2.7500    | 1.506    |
|                      | 17.00  | 1237.7           | 818.5           | 127.70         | 2.6471    | 1.532    |
|                      | 18.00  | 1247.7           | 828.5           | 127.70         | 2.5556    | 1.557    |
|                      | 19.00  | 1257.1           | 837.9           | 127.71         | 2.4737    | 1.580    |
|                      | 20.00  | 1266.0           | 846.7           | 127.69         | 2.4000    | 1.603    |

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8980 DST #1 Hickman D-#2 OXY USA Inc.

DATE: 03/19/96

TIME: 12:42:24  
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| Time  | Pressure<br>PSig | delta P<br>PSig | Temp.<br>DEG F | (T+dT)/dT | P <sup>2</sup> /10 <sup>6</sup> |
|-------|------------------|-----------------|----------------|-----------|---------------------------------|
| 21.00 | 1274.4           | 855.2           | 127.63         | 2.3333    | 1.624                           |
| 22.00 | 1282.5           | 863.3           | 127.57         | 2.2727    | 1.645                           |
| 23.00 | 1290.0           | 870.8           | 127.48         | 2.2174    | 1.664                           |
| 24.00 | 1297.2           | 878.0           | 127.39         | 2.1667    | 1.683                           |
| 25.00 | 1304.1           | 884.9           | 127.28         | 2.1200    | 1.701                           |
| 26.00 | 1310.5           | 891.3           | 127.19         | 2.0769    | 1.717                           |
| 27.00 | 1316.7           | 897.4           | 127.08         | 2.0370    | 1.734                           |
| 28.00 | 1322.4           | 903.2           | 126.96         | 2.0000    | 1.749                           |
| 29.00 | 1328.0           | 908.8           | 126.86         | 1.9655    | 1.764                           |
| 30.00 | 1333.2           | 914.0           | 126.74         | 1.9333    | 1.777                           |
| 31.00 | 1338.1           | 918.9           | 126.61         | 1.9032    | 1.791                           |
| 32.00 | 1342.8           | 923.6           | 126.51         | 1.8750    | 1.803                           |
| 33.00 | 1347.2           | 928.0           | 126.39         | 1.8485    | 1.815                           |
| 34.00 | 1351.5           | 932.3           | 126.28         | 1.8235    | 1.827                           |
| 35.00 | 1355.4           | 936.2           | 126.19         | 1.8000    | 1.837                           |
| 36.00 | 1359.2           | 940.0           | 126.09         | 1.7778    | 1.847                           |
| 37.00 | 1362.8           | 943.6           | 126.02         | 1.7568    | 1.857                           |
| 38.00 | 1366.3           | 947.1           | 125.93         | 1.7368    | 1.867                           |
| 39.00 | 1369.5           | 950.3           | 125.84         | 1.7179    | 1.876                           |
| 40.00 | 1372.5           | 953.3           | 125.76         | 1.7000    | 1.884                           |
| 41.00 | 1375.5           | 956.3           | 125.69         | 1.6829    | 1.892                           |
| 42.00 | 1378.2           | 959.0           | 125.64         | 1.6667    | 1.899                           |
| 43.00 | 1380.8           | 961.6           | 125.57         | 1.6512    | 1.907                           |
| 44.00 | 1383.2           | 964.0           | 125.51         | 1.6364    | 1.913                           |
| 45.00 | 1385.6           | 966.3           | 125.46         | 1.6222    | 1.920                           |
| 46.00 | 1387.7           | 968.5           | 125.41         | 1.6087    | 1.926                           |
| 47.00 | 1389.8           | 970.5           | 125.35         | 1.5957    | 1.931                           |
| 48.00 | 1391.7           | 972.5           | 125.30         | 1.5833    | 1.937                           |
| 49.00 | 1393.6           | 974.4           | 125.27         | 1.5714    | 1.942                           |
| 50.00 | 1395.3           | 976.1           | 125.23         | 1.5600    | 1.947                           |
| 51.00 | 1397.1           | 977.8           | 125.20         | 1.5490    | 1.952                           |
| 52.00 | 1398.6           | 979.4           | 125.14         | 1.5385    | 1.956                           |
| 53.00 | 1400.0           | 980.8           | 125.11         | 1.5283    | 1.960                           |
| 54.00 | 1401.4           | 982.2           | 125.09         | 1.5185    | 1.964                           |
| 55.00 | 1402.8           | 983.6           | 125.05         | 1.5091    | 1.968                           |
| 56.00 | 1403.9           | 984.7           | 125.00         | 1.5000    | 1.971                           |
| 57.00 | 1405.0           | 985.8           | 124.97         | 1.4912    | 1.974                           |
| 58.00 | 1406.2           | 987.0           | 124.94         | 1.4828    | 1.977                           |
| 59.00 | 1407.2           | 988.0           | 124.90         | 1.4746    | 1.980                           |

\*\*\*\*\* End Shut-in 1

\*\*\*\*\* Start Flow 2

|       |       |      |        |
|-------|-------|------|--------|
| 0.00  | 482.4 | 0.0  | 124.62 |
| 1.00  | 487.9 | 5.5  | 124.42 |
| 2.00  | 496.1 | 13.7 | 124.33 |
| 3.00  | 505.0 | 22.6 | 124.38 |
| 4.00  | 513.5 | 31.1 | 124.51 |
| 5.00  | 522.2 | 39.8 | 124.68 |
| 6.00  | 531.0 | 48.6 | 124.86 |
| 7.00  | 540.0 | 57.6 | 125.06 |
| 8.00  | 548.1 | 65.7 | 125.25 |
| 9.00  | 556.2 | 73.8 | 125.40 |
| 10.00 | 564.2 | 81.8 | 125.55 |
| 11.00 | 571.6 | 89.2 | 125.68 |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8980 DST #1 Hickman D-#2 OXY USA Inc.

DATE: 03/19/96

TIME: 12:42:24

|                      | Time  | Pressure<br>PSIg | delta P<br>PSIg | Temp.<br>DEG F | (T+dT)/dT | P^2/10^6 |
|----------------------|-------|------------------|-----------------|----------------|-----------|----------|
|                      | 12.00 | 579.0            | 96.6            | 125.82         |           |          |
|                      | 13.00 | 586.1            | 103.7           | 125.95         |           |          |
|                      | 14.00 | 593.7            | 111.3           | 126.05         |           |          |
|                      | 15.00 | 601.0            | 118.6           | 126.15         |           |          |
|                      | 16.00 | 607.8            | 125.4           | 126.20         |           |          |
|                      | 17.00 | 614.6            | 132.2           | 126.27         |           |          |
|                      | 18.00 | 621.3            | 138.9           | 126.34         |           |          |
|                      | 19.00 | 628.1            | 145.7           | 126.39         |           |          |
|                      | 20.00 | 634.7            | 152.3           | 126.45         |           |          |
|                      | 21.00 | 641.5            | 159.0           | 126.49         |           |          |
|                      | 22.00 | 647.9            | 165.5           | 126.53         |           |          |
|                      | 23.00 | 654.0            | 171.5           | 126.57         |           |          |
|                      | 24.00 | 660.3            | 177.8           | 126.61         |           |          |
|                      | 25.00 | 666.4            | 184.0           | 126.64         |           |          |
|                      | 26.00 | 672.8            | 190.3           | 126.68         |           |          |
|                      | 27.00 | 678.8            | 196.4           | 126.71         |           |          |
|                      | 28.00 | 684.8            | 202.3           | 126.74         |           |          |
|                      | 29.00 | 690.6            | 208.2           | 126.76         |           |          |
|                      | 30.00 | 696.3            | 213.9           | 126.78         |           |          |
|                      | 31.00 | 702.0            | 219.6           | 126.80         |           |          |
|                      | 32.00 | 707.6            | 225.2           | 126.82         |           |          |
|                      | 33.00 | 713.0            | 230.6           | 126.84         |           |          |
|                      | 34.00 | 718.0            | 235.6           | 126.84         |           |          |
|                      | 35.00 | 723.3            | 240.9           | 126.85         |           |          |
|                      | 36.00 | 728.7            | 246.2           | 126.85         |           |          |
|                      | 37.00 | 733.7            | 251.3           | 126.86         |           |          |
|                      | 38.00 | 739.0            | 256.6           | 126.86         |           |          |
|                      | 39.00 | 743.9            | 261.5           | 126.85         |           |          |
|                      | 40.00 | 748.5            | 266.1           | 126.86         |           |          |
|                      | 41.00 | 753.1            | 270.7           | 126.85         |           |          |
|                      | 42.00 | 757.8            | 275.4           | 126.85         |           |          |
|                      | 43.00 | 762.1            | 279.7           | 126.87         |           |          |
|                      | 44.00 | 766.8            | 284.3           | 126.84         |           |          |
|                      | 45.00 | 771.1            | 288.7           | 126.86         |           |          |
|                      | 46.00 | 775.7            | 293.2           | 126.86         |           |          |
|                      | 47.00 | 780.1            | 297.7           | 126.86         |           |          |
|                      | 48.00 | 784.5            | 302.1           | 126.85         |           |          |
|                      | 49.00 | 788.8            | 306.4           | 126.85         |           |          |
|                      | 50.00 | 792.9            | 310.5           | 126.86         |           |          |
|                      | 51.00 | 797.0            | 314.6           | 126.85         |           |          |
|                      | 52.00 | 801.1            | 318.7           | 126.85         |           |          |
|                      | 53.00 | 805.2            | 322.8           | 126.85         |           |          |
|                      | 54.00 | 809.0            | 326.6           | 126.84         |           |          |
|                      | 55.00 | 813.1            | 330.7           | 126.85         |           |          |
|                      | 56.00 | 816.9            | 334.5           | 126.84         |           |          |
|                      | 57.00 | 820.8            | 338.4           | 126.85         |           |          |
| ***** End Flow 2     | 58.00 | 824.5            | 342.1           | 126.84         |           |          |
| ***** Start Shutin 2 | 0.00  | 824.5            | 0.0             | 126.84         | 0.0000    | 0.680    |
|                      | 1.00  | 922.9            | 98.4            | 126.85         | 87.0000   | 0.852    |
|                      | 2.00  | 1066.7           | 242.2           | 126.88         | 44.0000   | 1.138    |
|                      | 3.00  | 1111.6           | 287.1           | 126.98         | 29.6667   | 1.236    |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8980 DST #1 Hickman D-#2 OXY USA Inc.

DATE: 03/19/96

TIME: 12:42:24

| Time  | Pressure<br>PSIg | delta P<br>PSIg | Temp.<br>DEG F | (T+dT)/dT | P <sup>2</sup> /10 <sup>6</sup> |
|-------|------------------|-----------------|----------------|-----------|---------------------------------|
| 4.00  | 1139.2           | 314.7           | 127.12         | 22.5000   | 1.298                           |
| 5.00  | 1162.3           | 337.8           | 127.27         | 18.2000   | 1.351                           |
| 6.00  | 1181.9           | 357.4           | 127.40         | 15.3333   | 1.397                           |
| 7.00  | 1198.3           | 373.8           | 127.51         | 13.2857   | 1.436                           |
| 8.00  | 1213.0           | 388.5           | 127.59         | 11.7500   | 1.471                           |
| 9.00  | 1226.3           | 401.8           | 127.68         | 10.5556   | 1.504                           |
| 10.00 | 1238.0           | 413.5           | 127.73         | 9.6000    | 1.533                           |
| 11.00 | 1249.1           | 424.6           | 127.78         | 8.8182    | 1.560                           |
| 12.00 | 1259.2           | 434.7           | 127.79         | 8.1667    | 1.585                           |
| 13.00 | 1268.6           | 444.1           | 127.79         | 7.6154    | 1.609                           |
| 14.00 | 1277.4           | 452.9           | 127.79         | 7.1429    | 1.632                           |
| 15.00 | 1285.6           | 461.1           | 127.79         | 6.7333    | 1.653                           |
| 16.00 | 1293.3           | 468.8           | 127.79         | 6.3750    | 1.673                           |
| 17.00 | 1300.5           | 476.0           | 127.79         | 6.0588    | 1.691                           |
| 18.00 | 1307.2           | 482.7           | 127.80         | 5.7778    | 1.709                           |
| 19.00 | 1313.6           | 489.1           | 127.83         | 5.5263    | 1.726                           |
| 20.00 | 1319.6           | 495.1           | 127.84         | 5.3000    | 1.741                           |
| 21.00 | 1325.2           | 500.7           | 127.83         | 5.0952    | 1.756                           |
| 22.00 | 1330.4           | 505.9           | 127.79         | 4.9091    | 1.770                           |
| 23.00 | 1335.5           | 511.0           | 127.80         | 4.7391    | 1.783                           |
| 24.00 | 1340.2           | 515.7           | 127.79         | 4.5833    | 1.796                           |
| 25.00 | 1344.6           | 520.1           | 127.79         | 4.4400    | 1.808                           |
| 26.00 | 1348.9           | 524.4           | 127.79         | 4.3077    | 1.819                           |
| 27.00 | 1352.8           | 528.3           | 127.79         | 4.1852    | 1.830                           |
| 28.00 | 1356.6           | 532.1           | 127.78         | 4.0714    | 1.840                           |
| 29.00 | 1360.1           | 535.6           | 127.71         | 3.9655    | 1.850                           |
| 30.00 | 1363.3           | 538.8           | 127.65         | 3.8667    | 1.859                           |
| 31.00 | 1366.4           | 541.9           | 127.61         | 3.7742    | 1.867                           |
| 32.00 | 1369.4           | 544.9           | 127.56         | 3.6875    | 1.875                           |
| 33.00 | 1372.2           | 547.7           | 127.52         | 3.6061    | 1.883                           |
| 34.00 | 1374.7           | 550.2           | 127.48         | 3.5294    | 1.890                           |
| 35.00 | 1377.3           | 552.8           | 127.43         | 3.4571    | 1.897                           |
| 36.00 | 1379.7           | 555.2           | 127.39         | 3.3889    | 1.904                           |
| 37.00 | 1381.9           | 557.4           | 127.34         | 3.3243    | 1.910                           |
| 38.00 | 1384.0           | 559.5           | 127.31         | 3.2632    | 1.916                           |
| 39.00 | 1386.0           | 561.5           | 127.28         | 3.2051    | 1.921                           |
| 40.00 | 1387.9           | 563.4           | 127.24         | 3.1500    | 1.926                           |
| 41.00 | 1389.8           | 565.3           | 127.20         | 3.0976    | 1.931                           |
| 42.00 | 1391.3           | 566.8           | 127.18         | 3.0476    | 1.936                           |
| 43.00 | 1392.9           | 568.4           | 127.13         | 3.0000    | 1.940                           |
| 44.00 | 1394.5           | 570.0           | 127.11         | 2.9545    | 1.944                           |
| 45.00 | 1395.9           | 571.4           | 127.06         | 2.9111    | 1.948                           |
| 46.00 | 1397.2           | 572.7           | 127.04         | 2.8696    | 1.952                           |
| 47.00 | 1398.4           | 573.9           | 127.01         | 2.8298    | 1.956                           |
| 48.00 | 1399.7           | 575.2           | 126.99         | 2.7917    | 1.959                           |
| 49.00 | 1400.8           | 576.3           | 126.96         | 2.7551    | 1.962                           |
| 50.00 | 1401.8           | 577.3           | 126.92         | 2.7200    | 1.965                           |
| 51.00 | 1402.9           | 578.4           | 126.90         | 2.6863    | 1.968                           |
| 52.00 | 1403.9           | 579.4           | 126.86         | 2.6538    | 1.971                           |
| 53.00 | 1404.7           | 580.2           | 126.85         | 2.6226    | 1.973                           |
| 54.00 | 1405.6           | 581.1           | 126.83         | 2.5926    | 1.976                           |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8980 DST #1 Hickman D-#2 OXY USA Inc.

DATE: 03/19/96

TIME: 12:42:24

| Time   | Pressure<br>PSIg | delta P<br>PSIg | Temp.<br>DEG F | (T+dT)/dT | P^2/10^6 |
|--------|------------------|-----------------|----------------|-----------|----------|
| 55.00  | 1406.5           | 582.0           | 126.81         | 2.5636    | 1.978    |
| 56.00  | 1407.1           | 582.6           | 126.77         | 2.5357    | 1.980    |
| 57.00  | 1407.9           | 583.4           | 126.74         | 2.5088    | 1.982    |
| 58.00  | 1408.6           | 584.1           | 126.72         | 2.4828    | 1.984    |
| 59.00  | 1409.2           | 584.7           | 126.72         | 2.4576    | 1.986    |
| 60.00  | 1409.9           | 585.4           | 126.68         | 2.4333    | 1.988    |
| 61.00  | 1410.5           | 586.0           | 126.67         | 2.4098    | 1.989    |
| 62.00  | 1411.1           | 586.6           | 126.66         | 2.3871    | 1.991    |
| 63.00  | 1411.6           | 587.1           | 126.64         | 2.3651    | 1.993    |
| 64.00  | 1412.0           | 587.5           | 126.63         | 2.3438    | 1.994    |
| 65.00  | 1412.5           | 588.0           | 126.62         | 2.3231    | 1.995    |
| 66.00  | 1412.9           | 588.4           | 126.61         | 2.3030    | 1.996    |
| 67.00  | 1413.5           | 589.0           | 126.58         | 2.2836    | 1.998    |
| 68.00  | 1413.8           | 589.3           | 126.57         | 2.2647    | 1.999    |
| 69.00  | 1414.3           | 589.8           | 126.55         | 2.2464    | 2.000    |
| 70.00  | 1414.7           | 590.2           | 126.54         | 2.2286    | 2.001    |
| 71.00  | 1415.0           | 590.5           | 126.52         | 2.2113    | 2.002    |
| 72.00  | 1415.4           | 590.9           | 126.50         | 2.1944    | 2.003    |
| 73.00  | 1415.6           | 591.1           | 126.48         | 2.1781    | 2.004    |
| 74.00  | 1416.0           | 591.5           | 126.45         | 2.1622    | 2.005    |
| 75.00  | 1416.3           | 591.8           | 126.42         | 2.1467    | 2.006    |
| 76.00  | 1416.5           | 592.0           | 126.41         | 2.1316    | 2.007    |
| 77.00  | 1416.7           | 592.2           | 126.38         | 2.1169    | 2.007    |
| 78.00  | 1417.0           | 592.5           | 126.34         | 2.1026    | 2.008    |
| 79.00  | 1417.2           | 592.7           | 126.33         | 2.0886    | 2.008    |
| 80.00  | 1417.4           | 593.0           | 126.29         | 2.0750    | 2.009    |
| 81.00  | 1417.7           | 593.2           | 126.27         | 2.0617    | 2.010    |
| 82.00  | 1417.9           | 593.4           | 126.24         | 2.0488    | 2.010    |
| 83.00  | 1418.2           | 593.7           | 126.22         | 2.0361    | 2.011    |
| 84.00  | 1418.4           | 593.9           | 126.20         | 2.0238    | 2.012    |
| 85.00  | 1418.5           | 594.0           | 126.17         | 2.0118    | 2.012    |
| 86.00  | 1418.7           | 594.2           | 126.16         | 2.0000    | 2.013    |
| 87.00  | 1418.8           | 594.3           | 126.13         | 1.9885    | 2.013    |
| 88.00  | 1419.0           | 594.5           | 126.11         | 1.9773    | 2.014    |
| 89.00  | 1419.1           | 594.6           | 126.08         | 1.9663    | 2.014    |
| 90.00  | 1419.3           | 594.8           | 126.06         | 1.9556    | 2.014    |
| 91.00  | 1419.5           | 595.0           | 126.05         | 1.9451    | 2.015    |
| 92.00  | 1419.5           | 595.0           | 126.04         | 1.9348    | 2.015    |
| 93.00  | 1419.7           | 595.2           | 126.03         | 1.9247    | 2.016    |
| 94.00  | 1419.8           | 595.3           | 126.01         | 1.9149    | 2.016    |
| 95.00  | 1419.9           | 595.4           | 126.00         | 1.9053    | 2.016    |
| 96.00  | 1420.0           | 595.5           | 125.99         | 1.8958    | 2.016    |
| 97.00  | 1420.1           | 595.6           | 125.98         | 1.8866    | 2.017    |
| 98.00  | 1420.2           | 595.7           | 125.97         | 1.8776    | 2.017    |
| 99.00  | 1420.3           | 595.8           | 125.96         | 1.8687    | 2.017    |
| 100.00 | 1420.5           | 596.0           | 125.95         | 1.8600    | 2.018    |
| 101.00 | 1420.6           | 596.1           | 125.95         | 1.8515    | 2.018    |
| 102.00 | 1420.6           | 596.1           | 125.94         | 1.8431    | 2.018    |
| 103.00 | 1420.7           | 596.2           | 125.93         | 1.8350    | 2.018    |
| 104.00 | 1420.8           | 596.3           | 125.92         | 1.8269    | 2.019    |
| 105.00 | 1421.0           | 596.5           | 125.88         | 1.8190    | 2.019    |

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8980 DST #1 Hickman D-#2 OXY USA Inc.

DATE: 03/19/96

TIME: 12:42:24  
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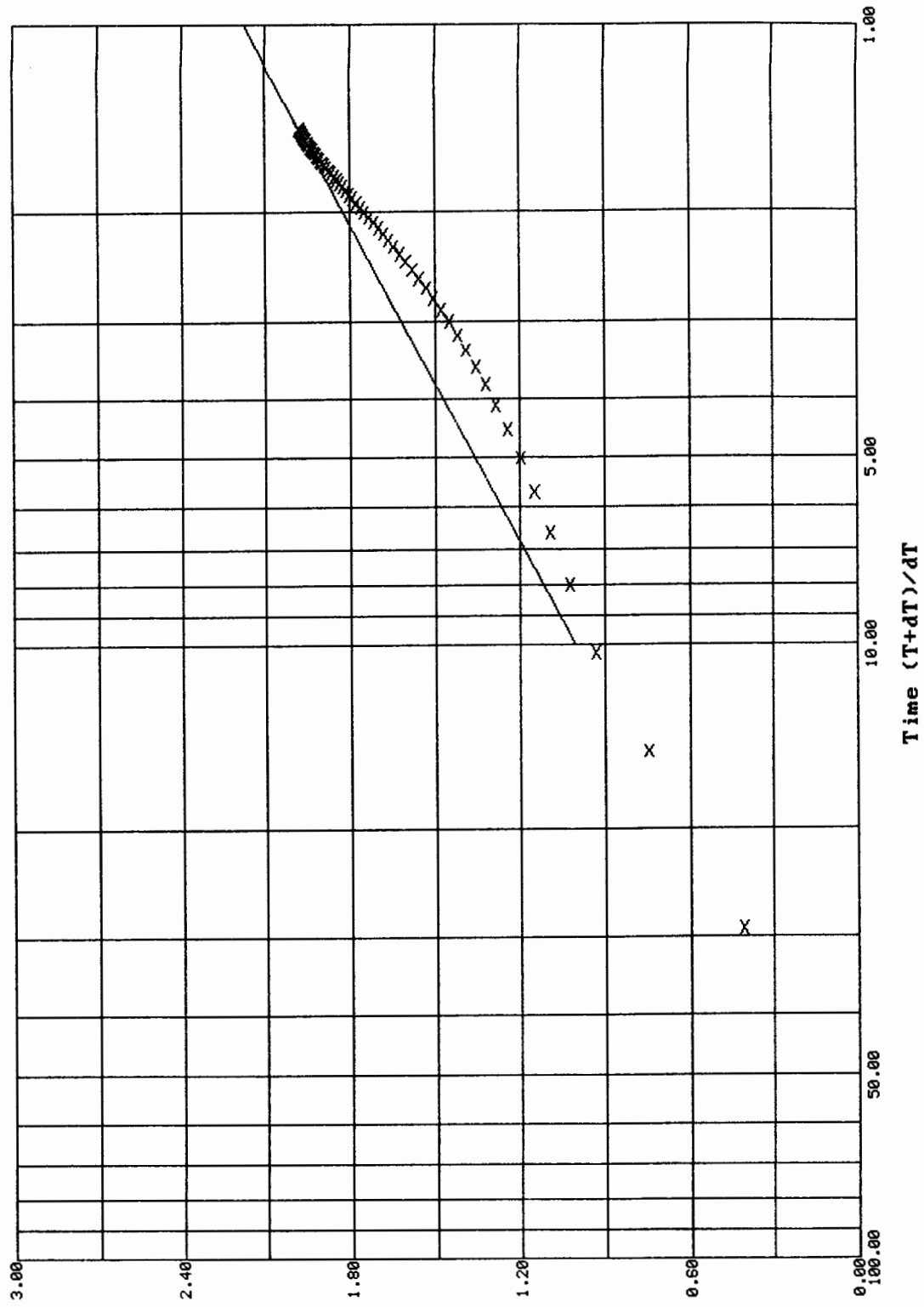
|                     | Time   | Pressure<br>PSig | delta P<br>PSig | Temp.<br>DEG F | (T+dT)/dT | P <sup>2</sup> /10 <sup>6</sup> |
|---------------------|--------|------------------|-----------------|----------------|-----------|---------------------------------|
|                     | 106.00 | 1421.1           | 596.6           | 125.88         | 1.8113    | 2.019                           |
|                     | 107.00 | 1421.2           | 596.7           | 125.86         | 1.8037    | 2.020                           |
|                     | 108.00 | 1421.3           | 596.8           | 125.86         | 1.7963    | 2.020                           |
|                     | 109.00 | 1421.3           | 596.8           | 125.84         | 1.7890    | 2.020                           |
|                     | 110.00 | 1421.4           | 596.9           | 125.84         | 1.7818    | 2.020                           |
|                     | 111.00 | 1421.5           | 597.0           | 125.83         | 1.7748    | 2.021                           |
|                     | 112.00 | 1421.5           | 597.0           | 125.80         | 1.7679    | 2.021                           |
|                     | 113.00 | 1421.6           | 597.1           | 125.80         | 1.7611    | 2.021                           |
|                     | 114.00 | 1421.6           | 597.1           | 125.78         | 1.7544    | 2.021                           |
|                     | 115.00 | 1421.8           | 597.3           | 125.77         | 1.7478    | 2.021                           |
|                     | 116.00 | 1421.9           | 597.4           | 125.76         | 1.7414    | 2.022                           |
|                     | 117.00 | 1421.9           | 597.4           | 125.74         | 1.7350    | 2.022                           |
|                     | 118.00 | 1422.0           | 597.5           | 125.72         | 1.7288    | 2.022                           |
|                     | 119.00 | 1422.0           | 597.5           | 125.71         | 1.7227    | 2.022                           |
|                     | 120.00 | 1422.1           | 597.6           | 125.71         | 1.7167    | 2.022                           |
|                     | 121.00 | 1422.1           | 597.6           | 125.68         | 1.7107    | 2.022                           |
| ***** End Shut-in 2 | 122.00 | 1422.2           | 597.7           | 125.67         | 1.7049    | 2.023                           |
| ***** Final Hydro.  | 409.00 | 2232.2           | 0.0             | 125.31         |           |                                 |

# P<sup>2</sup> Horner Plot: shut-in #1

8980 DST #1 Hickman D-#2 OXY USA Inc.

Slope: 1.1703  $\text{PSIg}^2/10^6/\text{cycle}$

Ext. Pressure: 1475.6783  $\text{PSIg}$



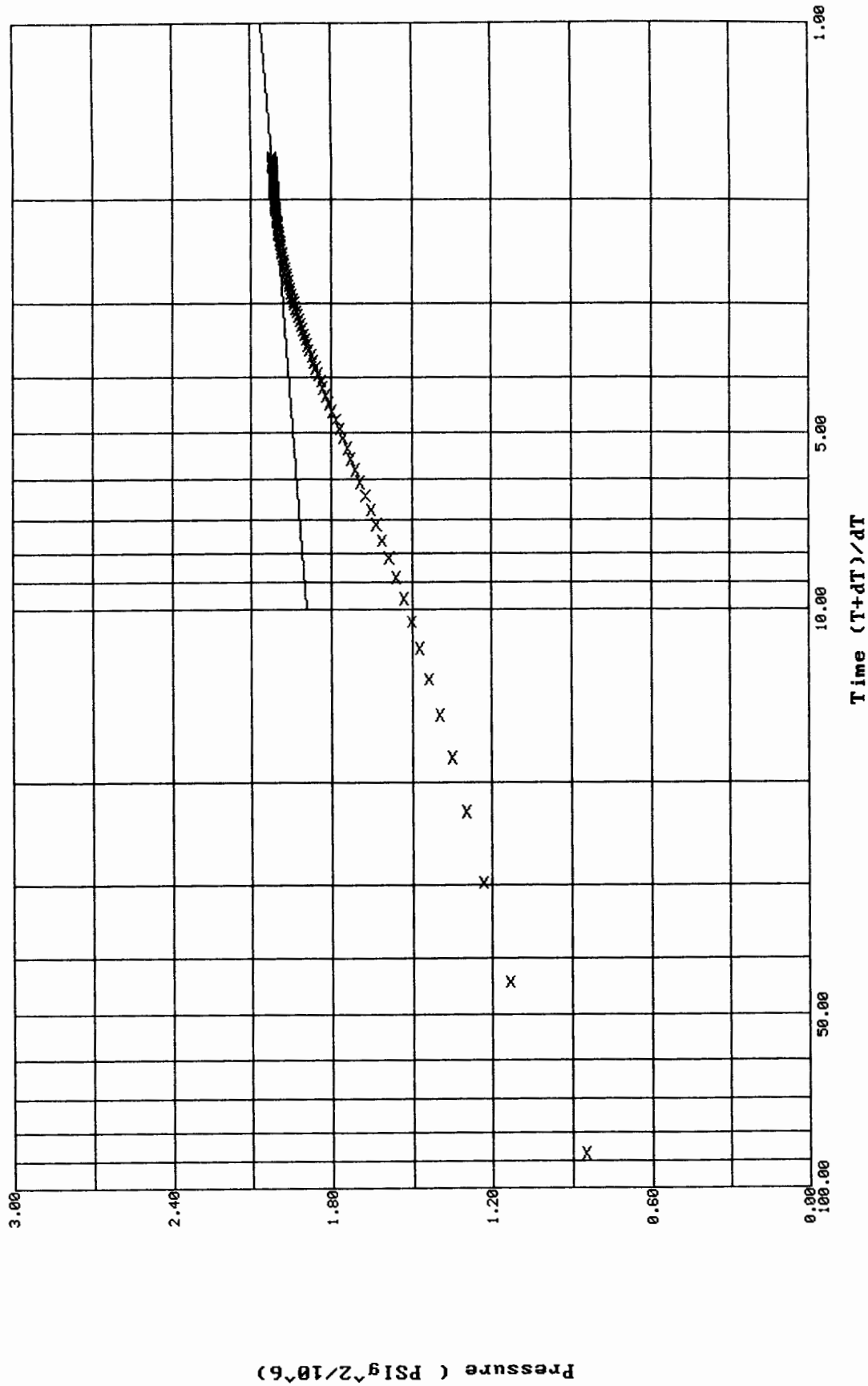
Pressure (  $\text{PSIg}^2/10^6$  )

# P<sup>2</sup> Horner Plot: shut-in #2

8980 DST #1 Hickman D-#2 OXY USA Inc.

Slope: 0.1674  $\text{PSIg}^2/10^6/\text{cycle}$

Ext. Pressure: 1436.1039  $\text{PSIg}$



\*\*\* TOOL DIAGRAM \*\*\* CONVENTIONAL

WELL NAME: Hickman D #2

LOCATION : 28-30S-33W Haskell Cty KS

TICKET No. 8980 D.S.T. No. 1 DATE 3-19-96

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 30 ft.

INTERVAL TOOL .....

TOTAL TOOL TO BOTTOM PACKERS AND ANCHOR ..... 36 ft.

TOTAL TOOL ..... 66 ft.

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY ..... 66 ft.

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands 77 Single 1 Total 4738 ft.

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4804 ft.

TOTAL DEPTH ..... 4790 ft.

TOTAL DRILL PIPE ABOVE K.B. .... 14 ft.

REMARKS:

FLUID SAMPLER DATA

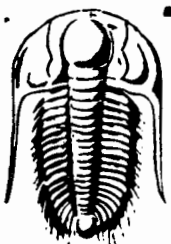
SAMPLER RECOVERY -

Gas 19.7 cubic ft, Oil 2300 ml, Mud 100 ml,  
Pressure 1300 PSI, Total 4000 ml

PIT MUD ANALYSIS -

Chlorides 2000 ppm, Viscosity 48, Mud Wt 9.1  
Filtrate 7.2, LCM 3#

|                          |      |
|--------------------------|------|
| P.O. SUB                 |      |
| C.O. SUB                 | 4724 |
| S.I. TOOL                | 4730 |
| Sampler                  | 4733 |
| HMV Hyd. Tool            | 4738 |
| JARS                     | 4743 |
| SAFETY JOINT             | 4745 |
| PACKER                   | 4749 |
| PACKER                   | 4754 |
| DEPTH 4754               |      |
| STUBB Perf 3 ft.         | 4757 |
| ANCHOR Pick up sub 5 ft. | 4762 |
| Alpine Recorder          | 4763 |
| Perf 5 ft.               | 4767 |
| Perf 5 ft.               | 4772 |
| Perf 5 ft.               | 4777 |
| T.C.<br>DEPTH            |      |
| Perf 5 ft.               | 4782 |
| Perf 3 ft.               | 4785 |
| AK-1 recorder            | 4787 |
| BULLNOSE Bull Plug 5 ft. |      |
| T.D.                     | 4790 |



# TRILOBITE TESTING

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

## GAS VOLUME REPORT

Oxy USA Inc.  
OPERATOR

Hickman D-42  
WELL NAME AND NO.

1  
DST NO.

1st. open

2nd open

| Min. | Ins. of Water<br>PSIG | Orifice Size | MCF/D | Min. | Ins. of Water<br>PSIG | Orifice Size | MCF/D           |
|------|-----------------------|--------------|-------|------|-----------------------|--------------|-----------------|
| 5    | 34                    | .75          | 82.8  | 5    | 50                    | .25          | 11.9            |
| 10   | 40                    | .75          | 89.8  | 10   | 85                    | .25          | 15.5            |
| 15   | 20                    | .75          | 63.5  | 15   | 70                    | .25          | 14.1            |
| 20   | 26                    | .25          | 8.56  | 20   | 76                    | .25          | 14.6            |
| 25   | 10                    | .25          | 5.32  | 25   | 62                    | .25          | 13.2            |
| 30   | 2                     | .25          | 2.37  | 30   | 28                    | .25          | 8.89            |
|      |                       |              |       | 35   | 22                    | .25          | 7.88            |
|      |                       |              |       | 40   | 20                    | .25          | 7.51            |
|      |                       |              |       | 45   | 18                    | .25          | 7.12            |
|      |                       |              |       | 50   | 16                    | .25          | 6.72            |
|      |                       |              |       | 55   | 18                    | .25          | 7.12            |
|      |                       |              |       | 60   | 14                    | .25          | <del>1.98</del> |
|      |                       |              |       |      |                       |              | 6.33            |

Remarks: 6 TS in 5 min.  
Gas will burn.

# TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 8980 Date 3-19-96  
Company Name Oxy USA Inc.  
Lease Huckman D-#2 Test No. #1  
County Haskell Ks. Sec. 28 Twp. 30 Rng. 33 W

### SAMPLER RECOVERY

Gas 19.7 Cubic Ft. ML  
Oil 2300 ML  
Mud 100 ML  
Water \_\_\_\_\_ ML  
Other \_\_\_\_\_ ML  
Pressure 1300 PSI  
Total 4000 ML

### PIT MUD ANALYSIS

Chlorides 2000 ppm.  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Viscosity 48  
Mud Weight 9.1  
Filtrate 7.2  
Other LCM 3#

### SAMPLER ANALYSIS

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
Gravity \_\_\_\_\_ corrected @ 60 F

### PIPE RECOVERY

TOP  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
MIDDLE  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
BOTTOM  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 8980

|  |                                     |   |
|--|-------------------------------------|---|
| Well Name & No. <u>Hickman D-42</u>              | Test No. <u>4</u>                   | Date <u>3-19-96</u>                                   |
| Company <u>Oxy USA Inc.</u>                      | Zone Tested <u>Marmaton</u>         |   |
| Address <u>Box 26100 Okla City OK 73126-0100</u> |                                     | Elevation <u>2950</u> KB <u>2939</u> GL               |
| Co. Rep / Geo. <u>Tim Hendrick</u>               | Cont. <u>Ual Energy #1</u>          | Est. Ft. of Pay <u>9</u> Por. <u>   </u> %            |
| Location: Sec. <u>28</u>                         | Twp. <u>30</u>                      | Rge. <u>33W</u> Co. <u>Haskell</u> State <u>KI</u>    |
| No. of Copies <u>   </u>                         | Distribution Sheet (Y, N) <u>N.</u> | Turnkey (Y, N) <u>N.</u> Evaluation (Y, N) <u>   </u> |

|   |  |                                     |
|---|--|-------------------------------------|
| Interval Tested <u>4754-4790</u>  | Initial Str Wt./Lbs. <u>18,000</u>     | Unseated Str Wt./Lbs. <u>74,000</u> |
| Anchor Length <u>36'</u>  | Wt. Set Lbs. <u>25,000</u>             | Wt. Pulled Loose/Lbs. <u>78,000</u> |
| Top Packer Depth <u>4749</u>  | Hole Size — 7 7/8" <u>   </u>          | Rubber Size — 6 3/4" <u>   </u>     |
| Bottom Packer Depth <u>4754</u>   | Wt. Pipe I.D. — 2.7 Ft. Run <u>   </u> |                                     |
| Total Depth <u>4790</u>   | Drill Collar — 2.25 Ft. Run <u>   </u> |                                     |
| Mud Wt. <u>9.1</u> LCM <u>34</u> Vis. <u>48</u> WL <u>7.2</u>           | Drill Pipe Size <u>4.5 x -Hole</u>     | Ft. Run <u>4738'</u>                |
| Blow Description <u>1st. Strong blow B.O.B. in 1 min {GTS in 5 min}</u> | <u>{Gauged @ 2.37 mcf}</u>             |                                     |
| <u>2nd. open B.O.B. as tool opened.</u>                                 | <u>{Gauged @ 6.33 mcf}</u>             |                                     |

| Recovery — Total Feet                       | Ft. in DC | Ft. in WP | Ft. in DP |
|---|-----------|-----------|-----------|
| Rec. <u>   </u> Feet Of <u>pulled 2stds</u> | %gas      | %oil      | %water    |
| Rec. <u>   </u> Feet Of <u>Dropped Bar</u>  | %gas      | %oil      | %water    |
| Rec. <u>   </u> Feet Of <u>Est. 4500 ?</u>  | %gas      | %oil      | %water    |
| Rec. <u>   </u> Feet Of <u>   </u>          | %gas      | %oil      | %water    |
| Rec. <u>   </u> Feet Of <u>   </u>          | %gas      | %oil      | %water    |

BHT 125 °F Gravity 32.0 °API D@ 50 °F Corrected Gravity 32.7 °API

RW     @     °F Chlorides     ppm Recovery Chlorides 2,000 ppm System

|  |                               |                          |
|--|-------------------------------|--------------------------|
| (A) Initial Hydrostatic Mud <u>2285</u>   <u>2349</u> PSI    | Recorder No. <u>2346</u>      | T-Started <u>1230</u>    |
| (B) First Initial Flow Pressure <u>204</u>   <u>243</u> PSI  | @ (depth) <u>4763</u>         | T-Open <u>14:45</u>      |
| (C) First Final Flow Pressure <u>419</u>   <u>389</u> PSI    | Recorder No. <u>11038</u>     | T-Pulled <u>1915</u>     |
| (D) Initial Shut-in Pressure <u>1409</u>   <u>1385</u> PSI   | @ (depth) <u>4787</u>         | T-Out <u>2300</u>        |
| (E) Second Initial Flow Pressure <u>482</u>   <u>507</u> PSI | Recorder No. <u>   </u>       |                          |
| (F) Second Final Flow Pressure <u>824</u>   <u>830</u> PSI   | @ (depth) <u>   </u>          |                          |
| (G) Final Shut-in Pressure <u>1422</u>   <u>1423</u> PSI     | Initial Opening <u>30 mm.</u> | Test <u>x</u> <u>600</u> |
| (H) Final Hydrostatic Mud <u>2232</u>   <u>2259</u> PSI      | Initial Shut-in <u>60 mm.</u> | Jars <u>x</u> <u>200</u> |

Final Flow 60 min. Safety Joint x 50

Final Shut-in 120 min. Straddle    

Circ. Sub X Drop Bar 35

Sampler X 200

Extra Packer    

Elect. Rec. x 150

Other    

TOTAL PRICE \$ 1235

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Tim Hendrick

Our Representative    

5

TRILOBITE TESTING L.L.C.

OPERATOR : Oxy USA Inc. DATE 3-21-96  
 WELL NAME: Hickman #D-2 KB 2950.00 ft TICKET NO: 7841 DST #2  
 LOCATION : 28-30S-33W Haskell Cty KS GR 2939.00 ft FORMATION: Morrow  
 INTERVAL : 5231.00 To 5271.00 ft TD 5271.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

| Mins   |             | Field  | 1      | 2      | 3   | 4   | TIME DATA-----         |
|--------|-------------|--------|--------|--------|-----|-----|------------------------|
| PF 30  | Rec.        | 1055   | 1055   | 2351   |     |     | PF Fr. 1613 to 1643 hr |
| SI 60  | Range(Psi ) | 4050.0 | 4050.0 | 4995.0 | 0.0 | 0.0 | IS Fr. 1643 to 1743 hr |
| SF 60  | Clock(hrs)  | AK-1   | AK-1   | Alpin  |     |     | SF Fr. 1743 to 1843 hr |
| FS 120 | Depth(ft )  | 5268.0 | 5268.0 | 5234.0 | 0.0 | 0.0 | FS Fr. 1843 to 2043 hr |

|                | Field  | 1      | 2      | 3   | 4   |                               |
|----------------|--------|--------|--------|-----|-----|-------------------------------|
| A. Init Hydro  | 2543.0 | 2504.0 | 2487.0 | 0.0 | 0.0 | T STARTED 1400 hr             |
| B. First Flow  | 86.0   | 91.0   | 47.0   | 0.0 | 0.0 | T ON BOTM 1611 hr             |
| B1. Final Flow | 108.0  | 108.0  | 84.0   | 0.0 | 0.0 | T OPEN 1613 hr                |
| C. In Shut-in  | 1579.0 | 1586.0 | 1589.0 | 0.0 | 0.0 | T PULLED 2043 hr              |
| D. Init Flow   | 108.0  | 119.0  | 86.0   | 0.0 | 0.0 | T OUT 1210 hr                 |
| E. Final Flow  | 161.0  | 168.0  | 155.0  | 0.0 | 0.0 |                               |
| F. Fl Shut-in  | 1589.0 | 1602.0 | 1599.0 | 0.0 | 0.0 | TOOL DATA-----                |
| G. Final Hydro | 2472.0 | 2476.0 | 2471.0 | 0.0 | 0.0 | Tool Wt. 1800.00 lbs          |
| Inside/Outside | 0      | 0      | I      |     |     | Wt Set On Packer 20000.00 lbs |
|                |        |        |        |     |     | Wt Pulled Loose 70000.00 lbs  |
|                |        |        |        |     |     | Initial Str Wt 70000.00 lbs   |
|                |        |        |        |     |     | Unseated Str Wt 50000.00 lbs  |
|                |        |        |        |     |     | Bot Choke 0.75 in             |
|                |        |        |        |     |     | Hole Size 7.88 in             |
|                |        |        |        |     |     | D Col. ID 2.25 in             |
|                |        |        |        |     |     | D. Pipe ID 3.80 in            |
|                |        |        |        |     |     | D.C. Length 0.00 ft           |
|                |        |        |        |     |     | D.P. Length 5230.00 ft        |

RECOVERY

Tot Fluid 510.00 ft of 0.00 ft in DC and 510.00 ft in DP  
 150.00 ft of Muddy oil - 70% oil, 30% mud  
 180.00 ft of Gassy mud & oil - 60% gas, 30% oil, 10% mud  
 180.00 ft of Gassy oil - 45% gas, 55% oil

TOOL DATA-----  
 Tool Wt. 1800.00 lbs  
 Wt Set On Packer 20000.00 lbs  
 Wt Pulled Loose 70000.00 lbs  
 Initial Str Wt 70000.00 lbs  
 Unseated Str Wt 50000.00 lbs  
 Bot Choke 0.75 in  
 Hole Size 7.88 in  
 D Col. ID 2.25 in  
 D. Pipe ID 3.80 in  
 D.C. Length 0.00 ft  
 D.P. Length 5230.00 ft

SALINITY 0.00 P.P.M. A.P.I. Gravity 38.10

BLOW DESCRIPTION

Initial Flow -  
 Strong blow, bottom of bucket in 2 min  
 Gas to surface @ 14 min, gas will burn

MUD DATA-----  
 Mud Type Chemical  
 Weight 9.00 lb/c  
 Vis. 46.00 S/L  
 W.L. 8.80 in3  
 F.C. 0.00 in  
 Mud Drop Y 50.0 ft

Initial Shutin -  
 Bled off 2", no blow back

Final Flow -  
 Strong blow, bottom of bucket as soon  
 as open tool

Final Shutin -  
 Bled off 2", .5" blow back

Amt. of fill 2.00 ft  
 Btm. H. Temp. 122.00 F  
 Hole Condition Good  
 % Porosity 0.00  
 Packer Size 6.75 in  
 No. of Packers 2  
 Cushion Amt. 0.00  
 Cushion Type  
 Reversed Out N  
 Tool Chased N  
 Tester Mike Colantonio  
 Co. Rep. Tim Hedrick  
 Contr. Val Energy  
 Rig # 1  
 Unit #  
 Pump T.

SAMPLES: Yes 1  
 SENT TO: Caraway Lab. Liberal

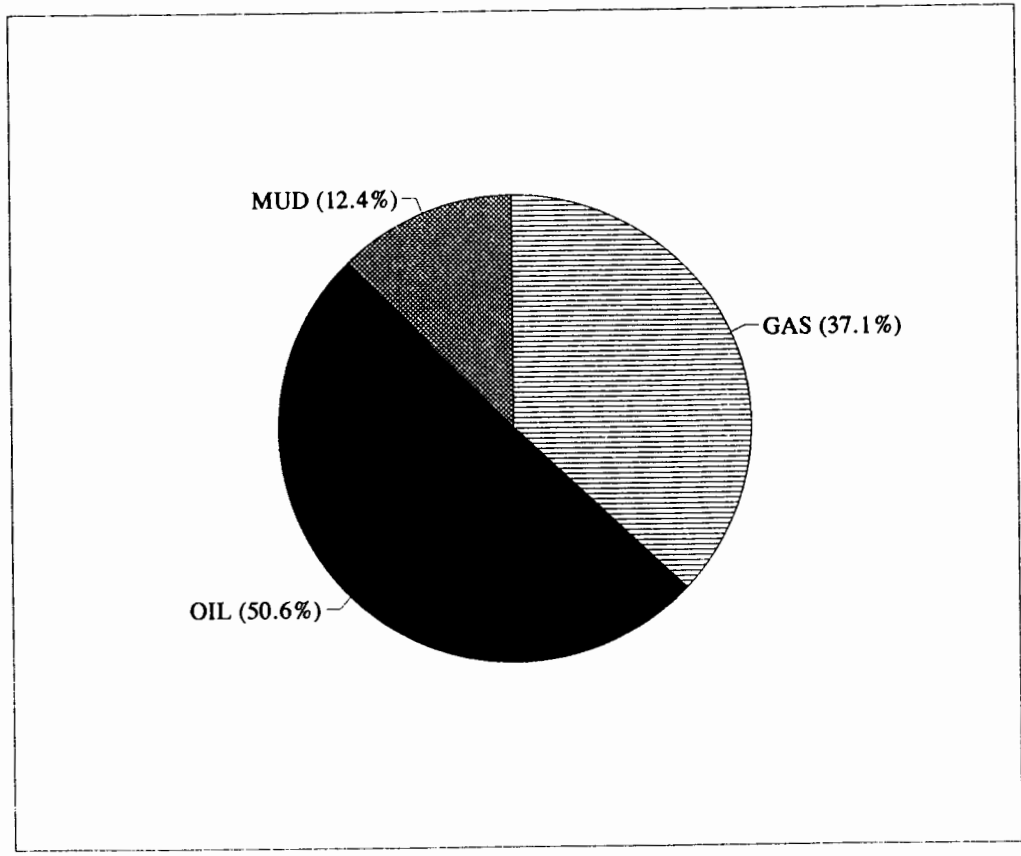
Test Successful: Y

CALCULATED RECOVERY ANALYSIS - DRILL PIPE  
DST # 2 TICKE 7841

| SAMPL # | TOTAL FEET | GAS    |      | OIL    |      |   | WATE FEET | MUD    |    |
|---------|------------|--------|------|--------|------|---|-----------|--------|----|
|         |            | %      | FEET | %      | FEET | % |           | FEET   | %  |
| 1       | 150        |        | 0    | 70     | 105  |   | 0         | 30     | 45 |
| 2       | 180        | 60     | 108  | 30     | 54   |   | 0         | 10     | 18 |
| 3       | 180        | 45     | 81   | 55     | 99   |   | 0         |        | 0  |
| 4       |            |        | 0    |        | 0    |   | 0         |        | 0  |
| 5       |            |        | 0    |        | 0    |   | 0         |        | 0  |
| 6       |            |        | 0    |        | 0    |   | 0         |        | 0  |
| TOTAL   | 510        | 37.059 | 189  | 50.588 | 258  | 0 | 0         | 12.353 | 63 |

HRS O BBL/DAY

BBL OIL= 3.6688 \* 1.5 58.7  
BBL WATER= 0 \* 0  
BBL MUD= 0.8959  
BBL GAS 2.6876



GAS RECOVERY  
-----

COMPANY: Oxy USA Inc. DATE: 3-21-96  
WELL NAME: Hickman #D-2 KB Elev: 2950.00 ft TICKET #7841 DST #2  
WELL LOCATION: 28-30S-33W Haskell Cty KS GR Elev: 2939.00 ft FORMATION: Morrow  
INTERVAL Fr.: 5231.00 To 5271.00 T.D.: 5271.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Merla

\*\*\*\*\* GAS RATES FOR FLOW #1

| Time<br>(min) | Orifice<br>(in) | Pressure<br>(Psi) | H2O<br>(in) | Rate<br>(cf/d) |
|---------------|-----------------|-------------------|-------------|----------------|
| 15            | 0.38            | 0                 | 38          | 21900.0        |
| 20            | 0.38            | 0                 | 44          | 23600.0        |
| 25            | 0.38            | 0                 | 52          | 25700.0        |
| 30            | 0.38            | 0                 | 58          | 27100.0        |

\*\*\*\*\* GAS RATES FOR FLOW #2

| Time<br>(min) | Orifice<br>(in) | Pressure<br>(Psi) | H2O<br>(in) | Rate<br>(cf/d) |
|---------------|-----------------|-------------------|-------------|----------------|
| 5             | 0.38            | 0                 | 70          | 29800.0        |
| 10            | 0.38            | 0                 | 70          | 29800.0        |
| 15            | 0.38            | 0                 | 58          | 27100.0        |
| 20            | 0.38            | 0                 | 56          | 26600.0        |
| 25            | 0.38            | 0                 | 50          | 25200.0        |
| 30            | 0.38            | 0                 | 42          | 23100.0        |
| 35            | 0.38            | 0                 | 40          | 22500.0        |
| 40            | 0.38            | 0                 | 38          | 21900.0        |
| 45            | 0.38            | 0                 | 40          | 22500.0        |
| 50            | 0.38            | 0                 | 40          | 22500.0        |
| 55            | 0.38            | 0                 | 38          | 21900.0        |
| 60            | 0.38            | 0                 | 38          | 21900.0        |

NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L.L.C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
Fax: 913-625-5620

Analyzed by:
Caraway Analytical, L.L.C.
728 North Roosevelt
Liberal, Kansas 67901
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number: 960163
Sample From: Hickman D-2 DST 2
Producer: Oxy USA, Inc.
Date:
Time:
Sampler:
Source:

Analyzed: 03/22/96
Pressure:
Temperature:
Location: 28-30-33
County: Haskell
State: Kansas
Formation: Morrow

Table with 3 columns: Component, Mole %, GPM. Rows include Helium, Oxygen, Nitrogen, Carbon Dioxide, Methane, Ethane, Propane, Iso Butane, Normal Butane, Iso Pentane, Normal Pentane, Hexanes Plus.

TOTAL: 100.000 9.842
Z Fact: 0.9946
SP.GR.: 0.8964
BTU (SAT): 1462.8 @ 14.73 psia
BTU (DRY): 1488.7 @ 14.73 psia
OCTANE RATING: 113.4

COMMENTS: No pressure in bottle, sample entered under vacuum 0.052

# TEST HISTORY

7841 DST#2 Hickman #D-2 Oxy Usa. Inc.

## Flag Points

t (Min.) P (PSig)

|    |        |         |
|----|--------|---------|
| A: | 0.00   | 2487.11 |
| B: | 0.00   | 47.16   |
| C: | 27.00  | 84.34   |
| D: | 60.00  | 1589.08 |
| E: | 0.00   | 86.44   |
| F: | 58.00  | 155.26  |
| G: | 121.00 | 1599.15 |
| Q: | 0.00   | 2470.74 |

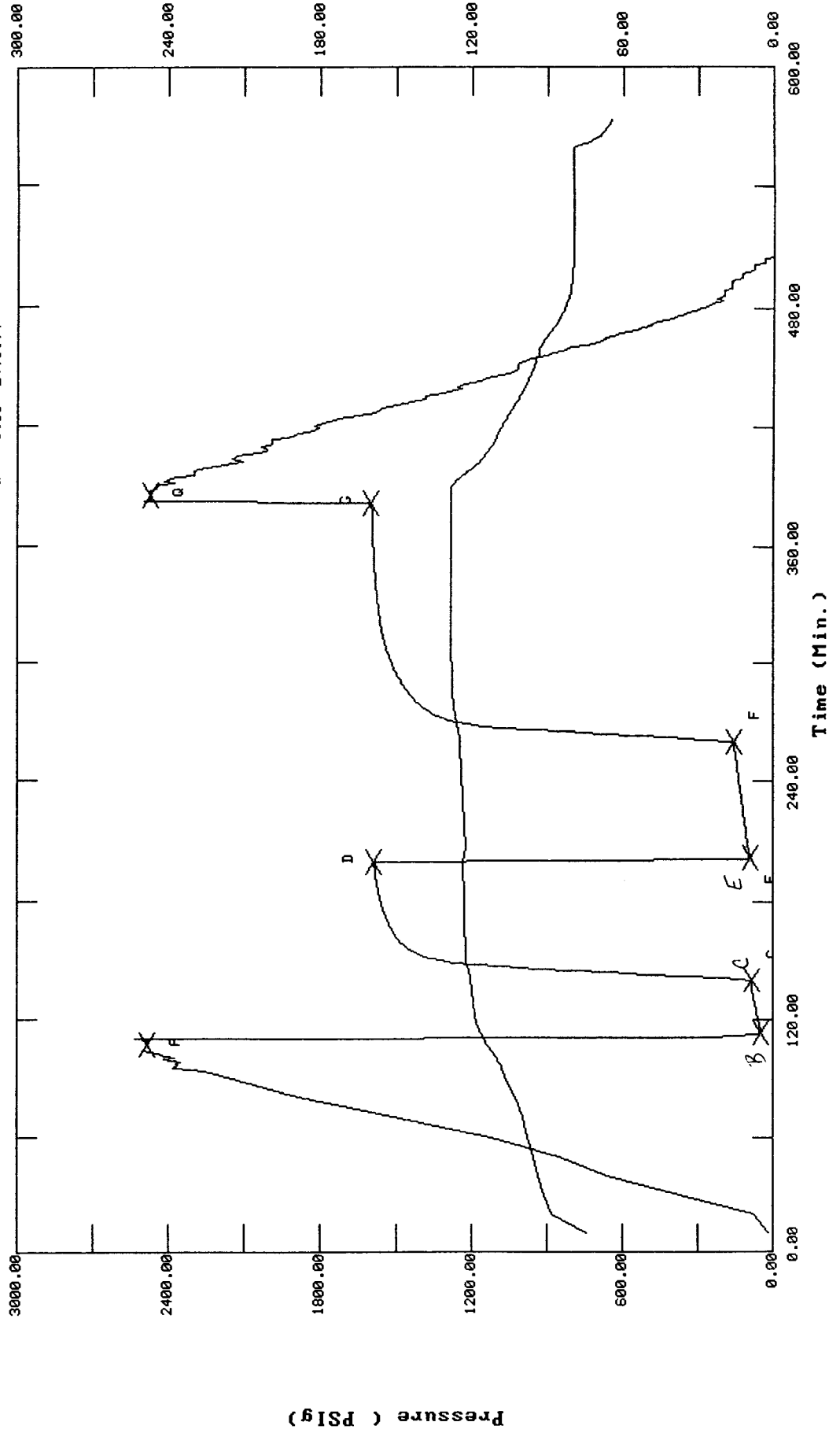
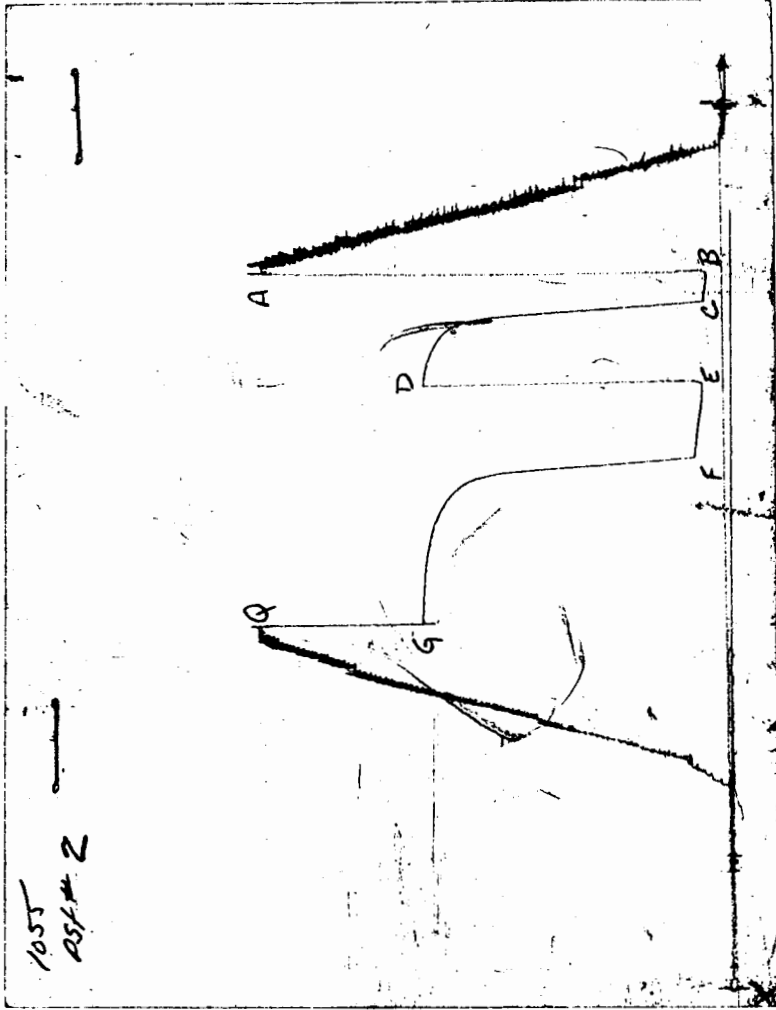


CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7841 DST#2 Hickman #D-2 Oxy Usa. Inc.

DATE: 03/21/96

TIME: 14:35:13

|                      | Time   | Pressure<br>PSIg | delta P<br>PSIg | Temp.<br>DEG F | (T+dT)/dT | P <sup>2</sup> /10 <sup>6</sup> |
|----------------------|--------|------------------|-----------------|----------------|-----------|---------------------------------|
| ***** Initial Hydro. | 107.00 | 2487.1           | 0.0             | 113.81         |           |                                 |
| ***** Start Flow 1   | 0.00   | 47.2             | 0.0             | 116.20         |           |                                 |
|                      | 1.00   | 45.6             | -1.5            | 116.67         |           |                                 |
|                      | 2.00   | 47.4             | 0.3             | 117.09         |           |                                 |
|                      | 3.00   | 50.5             | 3.4             | 117.45         |           |                                 |
|                      | 4.00   | 51.8             | 4.6             | 117.73         |           |                                 |
|                      | 5.00   | 53.5             | 6.4             | 118.01         |           |                                 |
|                      | 6.00   | 55.5             | 8.3             | 118.17         |           |                                 |
|                      | 7.00   | 56.6             | 9.4             | 118.34         |           |                                 |
|                      | 8.00   | 59.6             | 12.4            | 118.49         |           |                                 |
|                      | 9.00   | 60.8             | 13.6            | 118.67         |           |                                 |
|                      | 10.00  | 61.9             | 14.8            | 118.78         |           |                                 |
|                      | 11.00  | 63.9             | 16.8            | 118.89         |           |                                 |
|                      | 12.00  | 64.6             | 17.5            | 118.99         |           |                                 |
|                      | 13.00  | 66.5             | 19.4            | 119.09         |           |                                 |
|                      | 14.00  | 68.9             | 21.7            | 119.20         |           |                                 |
|                      | 15.00  | 69.1             | 21.9            | 119.29         |           |                                 |
|                      | 16.00  | 71.1             | 23.9            | 119.39         |           |                                 |
|                      | 17.00  | 74.1             | 26.9            | 119.50         |           |                                 |
|                      | 18.00  | 75.5             | 28.4            | 119.59         |           |                                 |
|                      | 19.00  | 76.9             | 29.7            | 119.67         |           |                                 |
|                      | 20.00  | 78.1             | 31.0            | 119.77         |           |                                 |
|                      | 21.00  | 80.2             | 33.1            | 119.87         |           |                                 |
|                      | 22.00  | 80.6             | 33.4            | 119.95         |           |                                 |
|                      | 23.00  | 80.6             | 33.5            | 120.05         |           |                                 |
|                      | 24.00  | 81.9             | 34.7            | 120.14         |           |                                 |
|                      | 25.00  | 84.3             | 37.2            | 120.27         |           |                                 |
|                      | 26.00  | 84.5             | 37.3            | 120.34         |           |                                 |
| ***** End Flow 1     | 27.00  | 84.3             | 37.2            | 120.44         |           |                                 |
| ***** Start Shutin 1 | 0.00   | 84.3             | 0.0             | 120.44         | 0.0000    | 0.007                           |
|                      | 1.00   | 200.6            | 116.2           | 120.53         | 28.0000   | 0.040                           |
|                      | 2.00   | 349.6            | 265.2           | 120.64         | 14.5000   | 0.122                           |
|                      | 3.00   | 502.0            | 417.7           | 120.78         | 10.0000   | 0.252                           |
|                      | 4.00   | 651.9            | 567.5           | 120.95         | 7.7500    | 0.425                           |
|                      | 5.00   | 797.0            | 712.6           | 121.13         | 6.4000    | 0.635                           |
|                      | 6.00   | 941.0            | 856.7           | 121.32         | 5.5000    | 0.885                           |
|                      | 7.00   | 1078.5           | 994.2           | 121.54         | 4.8571    | 1.163                           |
|                      | 8.00   | 1191.5           | 1107.2          | 121.79         | 4.3750    | 1.420                           |
|                      | 9.00   | 1269.6           | 1185.2          | 122.10         | 4.0000    | 1.612                           |
|                      | 10.00  | 1323.2           | 1238.9          | 122.10         | 3.7000    | 1.751                           |
|                      | 11.00  | 1361.0           | 1276.7          | 122.10         | 3.4545    | 1.852                           |
|                      | 12.00  | 1390.7           | 1306.3          | 122.11         | 3.2500    | 1.934                           |
|                      | 13.00  | 1411.8           | 1327.5          | 122.11         | 3.0769    | 1.993                           |
|                      | 14.00  | 1427.9           | 1343.6          | 122.11         | 2.9286    | 2.039                           |
|                      | 15.00  | 1441.1           | 1356.8          | 122.11         | 2.8000    | 2.077                           |
|                      | 16.00  | 1452.7           | 1368.4          | 122.11         | 2.6875    | 2.110                           |
|                      | 17.00  | 1462.7           | 1378.3          | 122.15         | 2.5882    | 2.139                           |
|                      | 18.00  | 1472.3           | 1387.9          | 122.55         | 2.5000    | 2.168                           |
|                      | 19.00  | 1479.7           | 1395.4          | 122.21         | 2.4211    | 2.190                           |
|                      | 20.00  | 1486.9           | 1402.5          | 122.36         | 2.3500    | 2.211                           |
|                      | 21.00  | 1493.2           | 1408.9          | 122.45         | 2.2857    | 2.230                           |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7841 DST#2 Hickman #D-2 Oxy Usa. Inc.

DATE: 03/21/96

TIME: 14:35:13

| Time                | Pressure<br>PSig | delta<br>PSig | P    | Temp.<br>DEG F | (T+dT)/dT | P <sup>2</sup> /10 <sup>6</sup> |
|---------------------|------------------|---------------|------|----------------|-----------|---------------------------------|
| 22.00               | 1499.0           | 1414.7        |      | 122.59         | 2.2273    | 2.247                           |
| 23.00               | 1504.5           | 1420.1        |      | 122.69         | 2.1739    | 2.263                           |
| 24.00               | 1509.6           | 1425.3        |      | 122.75         | 2.1250    | 2.279                           |
| 25.00               | 1514.3           | 1430.0        |      | 122.79         | 2.0800    | 2.293                           |
| 26.00               | 1518.7           | 1434.4        |      | 122.83         | 2.0385    | 2.307                           |
| 27.00               | 1523.2           | 1438.9        |      | 122.86         | 2.0000    | 2.320                           |
| 28.00               | 1527.2           | 1442.9        |      | 122.89         | 1.9643    | 2.332                           |
| 29.00               | 1531.2           | 1446.8        |      | 122.94         | 1.9310    | 2.344                           |
| 30.00               | 1534.8           | 1450.4        |      | 122.96         | 1.9000    | 2.356                           |
| 31.00               | 1538.1           | 1453.7        |      | 122.98         | 1.8710    | 2.366                           |
| 32.00               | 1541.3           | 1457.0        |      | 123.00         | 1.8438    | 2.376                           |
| 33.00               | 1544.3           | 1460.0        |      | 123.02         | 1.8182    | 2.385                           |
| 34.00               | 1547.0           | 1462.7        |      | 123.01         | 1.7941    | 2.393                           |
| 35.00               | 1549.8           | 1465.5        |      | 123.04         | 1.7714    | 2.402                           |
| 36.00               | 1552.5           | 1468.1        |      | 123.07         | 1.7500    | 2.410                           |
| 37.00               | 1555.0           | 1470.7        |      | 123.07         | 1.7297    | 2.418                           |
| 38.00               | 1557.4           | 1473.0        |      | 123.09         | 1.7105    | 2.425                           |
| 39.00               | 1559.7           | 1475.4        |      | 123.08         | 1.6923    | 2.433                           |
| 40.00               | 1561.7           | 1477.4        |      | 123.09         | 1.6750    | 2.439                           |
| 41.00               | 1563.7           | 1479.4        |      | 123.10         | 1.6585    | 2.445                           |
| 42.00               | 1565.7           | 1481.3        |      | 123.14         | 1.6429    | 2.451                           |
| 43.00               | 1567.5           | 1483.2        |      | 123.16         | 1.6279    | 2.457                           |
| 44.00               | 1569.3           | 1484.9        |      | 123.19         | 1.6136    | 2.463                           |
| 45.00               | 1571.0           | 1486.7        |      | 123.19         | 1.6000    | 2.468                           |
| 46.00               | 1572.6           | 1488.3        |      | 123.21         | 1.5870    | 2.473                           |
| 47.00               | 1574.1           | 1489.8        |      | 123.21         | 1.5745    | 2.478                           |
| 48.00               | 1575.7           | 1491.4        |      | 123.21         | 1.5625    | 2.483                           |
| 49.00               | 1577.2           | 1492.8        |      | 123.22         | 1.5510    | 2.487                           |
| 50.00               | 1578.4           | 1494.1        |      | 123.21         | 1.5400    | 2.491                           |
| 51.00               | 1579.7           | 1495.3        |      | 123.23         | 1.5294    | 2.495                           |
| 52.00               | 1580.9           | 1496.5        |      | 123.24         | 1.5192    | 2.499                           |
| 53.00               | 1582.2           | 1497.9        |      | 123.27         | 1.5094    | 2.503                           |
| 54.00               | 1583.3           | 1499.0        |      | 123.26         | 1.5000    | 2.507                           |
| 55.00               | 1584.5           | 1500.1        |      | 123.26         | 1.4909    | 2.511                           |
| 56.00               | 1585.6           | 1501.2        |      | 123.27         | 1.4821    | 2.514                           |
| 57.00               | 1586.4           | 1502.1        |      | 123.29         | 1.4737    | 2.517                           |
| 58.00               | 1587.4           | 1503.1        |      | 123.29         | 1.4655    | 2.520                           |
| 59.00               | 1588.2           | 1503.9        |      | 123.31         | 1.4576    | 2.523                           |
| 60.00               | 1589.1           | 1504.7        |      | 123.31         | 1.4500    | 2.525                           |
| ***** End Shut-in 1 |                  |               |      |                |           |                                 |
| ***** Start Flow 2  | 0.00             | 86.4          | 0.0  | 123.16         |           |                                 |
|                     | 1.00             | 85.9          | -0.5 | 123.03         |           |                                 |
|                     | 2.00             | 90.5          | 4.1  | 122.83         |           |                                 |
|                     | 3.00             | 94.9          | 8.5  | 122.71         |           |                                 |
|                     | 4.00             | 95.9          | 9.5  | 122.60         |           |                                 |
|                     | 5.00             | 96.1          | 9.7  | 122.45         |           |                                 |
|                     | 6.00             | 99.9          | 13.4 | 122.40         |           |                                 |
|                     | 7.00             | 100.0         | 13.6 | 122.41         |           |                                 |
|                     | 8.00             | 101.9         | 15.4 | 122.47         |           |                                 |
|                     | 9.00             | 102.6         | 16.2 | 122.50         |           |                                 |
|                     | 10.00            | 104.1         | 17.6 | 122.56         |           |                                 |
|                     | 11.00            | 106.5         | 20.1 | 122.65         |           |                                 |

-----  
 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING  
 TEST: 7841 DST#2 Hickman #D-2 Oxy Usa. Inc.  
 DATE: 03/21/96 TIME: 14:35:13  
 -----

|       | Time           | Pressure<br>PSIg | delta P<br>PSIg | Temp.<br>DEG F | (T+dT)/dT | P^2/10^6 |
|-------|----------------|------------------|-----------------|----------------|-----------|----------|
|       | 12.00          | 105.0            | 18.5            | 122.66         |           |          |
|       | 13.00          | 107.9            | 21.5            | 122.73         |           |          |
|       | 14.00          | 108.3            | 21.9            | 122.78         |           |          |
|       | 15.00          | 108.3            | 21.8            | 122.84         |           |          |
|       | 16.00          | 109.0            | 22.6            | 122.90         |           |          |
|       | 17.00          | 110.8            | 24.3            | 122.97         |           |          |
|       | 18.00          | 112.5            | 26.0            | 122.99         |           |          |
|       | 19.00          | 113.6            | 27.2            | 123.05         |           |          |
|       | 20.00          | 114.6            | 28.2            | 123.11         |           |          |
|       | 21.00          | 115.6            | 29.1            | 123.15         |           |          |
|       | 22.00          | 117.0            | 30.5            | 123.21         |           |          |
|       | 23.00          | 117.7            | 31.2            | 123.26         |           |          |
|       | 24.00          | 119.6            | 33.2            | 123.28         |           |          |
|       | 25.00          | 119.6            | 33.2            | 123.33         |           |          |
|       | 26.00          | 120.6            | 34.2            | 123.38         |           |          |
|       | 27.00          | 123.4            | 36.9            | 123.42         |           |          |
|       | 28.00          | 123.3            | 36.8            | 123.48         |           |          |
|       | 29.00          | 124.7            | 38.3            | 123.52         |           |          |
|       | 30.00          | 125.8            | 39.4            | 123.58         |           |          |
|       | 31.00          | 126.4            | 39.9            | 123.61         |           |          |
|       | 32.00          | 127.5            | 41.0            | 123.66         |           |          |
|       | 33.00          | 128.0            | 41.5            | 123.70         |           |          |
|       | 34.00          | 129.9            | 43.5            | 123.75         |           |          |
|       | 35.00          | 130.3            | 43.9            | 123.79         |           |          |
|       | 36.00          | 132.1            | 45.7            | 123.83         |           |          |
|       | 37.00          | 133.6            | 47.2            | 123.88         |           |          |
|       | 38.00          | 134.1            | 47.7            | 123.93         |           |          |
|       | 39.00          | 135.5            | 49.1            | 123.97         |           |          |
|       | 40.00          | 136.1            | 49.7            | 124.02         |           |          |
|       | 41.00          | 137.1            | 50.7            | 124.05         |           |          |
|       | 42.00          | 138.4            | 52.0            | 124.09         |           |          |
|       | 43.00          | 139.6            | 53.1            | 124.14         |           |          |
|       | 44.00          | 141.2            | 54.7            | 124.19         |           |          |
|       | 45.00          | 142.2            | 55.7            | 124.23         |           |          |
|       | 46.00          | 142.6            | 56.1            | 124.27         |           |          |
|       | 47.00          | 143.3            | 56.9            | 124.30         |           |          |
|       | 48.00          | 144.4            | 58.0            | 124.34         |           |          |
|       | 49.00          | 145.5            | 59.1            | 124.39         |           |          |
|       | 50.00          | 146.1            | 59.7            | 124.44         |           |          |
|       | 51.00          | 149.0            | 62.6            | 124.47         |           |          |
|       | 52.00          | 148.9            | 62.4            | 124.52         |           |          |
|       | 53.00          | 149.4            | 62.9            | 124.55         |           |          |
|       | 54.00          | 151.2            | 64.8            | 124.59         |           |          |
|       | 55.00          | 152.2            | 65.8            | 124.63         |           |          |
|       | 56.00          | 153.3            | 66.9            | 124.67         |           |          |
|       | 57.00          | 154.3            | 67.8            | 124.71         |           |          |
|       | 58.00          | 155.3            | 68.8            | 124.75         |           |          |
| ***** | End Flow 2     |                  |                 |                |           |          |
| ***** | Start Shutin 2 | 0.00             | 155.3           | 0.0            | 124.75    | 0.0000   |
|       |                | 1.00             | 277.6           | 122.4          | 124.79    | 86.0000  |
|       |                | 2.00             | 412.3           | 257.1          | 124.85    | 43.5000  |
|       |                | 3.00             | 547.0           | 391.8          | 124.95    | 29.3333  |
|       |                |                  |                 |                |           | 0.299    |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7841 DST#2 Hickman #D-2 Oxy Usa. Inc.

DATE: 03/21/96

TIME: 14:35:13

| Time  | Pressure<br>PSIg | delta P<br>PSIg | P | Temp.<br>DEG F | (T+dT)/dT | P <sup>2</sup> /10 <sup>6</sup> |
|-------|------------------|-----------------|---|----------------|-----------|---------------------------------|
| 4.00  | 683.0            | 527.7           |   | 125.04         | 22.2500   | 0.466                           |
| 5.00  | 824.3            | 669.1           |   | 125.19         | 18.0000   | 0.680                           |
| 6.00  | 963.0            | 807.7           |   | 125.33         | 15.1667   | 0.927                           |
| 7.00  | 1076.4           | 921.2           |   | 125.50         | 13.1429   | 1.159                           |
| 8.00  | 1157.3           | 1002.0          |   | 125.66         | 11.6250   | 1.339                           |
| 9.00  | 1216.3           | 1061.0          |   | 125.88         | 10.4444   | 1.479                           |
| 10.00 | 1260.3           | 1105.1          |   | 126.03         | 9.5000    | 1.588                           |
| 11.00 | 1293.6           | 1138.3          |   | 126.18         | 8.7273    | 1.673                           |
| 12.00 | 1318.9           | 1163.7          |   | 126.35         | 8.0833    | 1.740                           |
| 13.00 | 1339.0           | 1183.7          |   | 126.50         | 7.5385    | 1.793                           |
| 14.00 | 1355.5           | 1200.3          |   | 126.65         | 7.0714    | 1.837                           |
| 15.00 | 1369.5           | 1214.3          |   | 126.78         | 6.6667    | 1.876                           |
| 16.00 | 1381.6           | 1226.4          |   | 126.90         | 6.3125    | 1.909                           |
| 17.00 | 1392.3           | 1237.0          |   | 127.01         | 6.0000    | 1.938                           |
| 18.00 | 1402.1           | 1246.8          |   | 127.11         | 5.7222    | 1.966                           |
| 19.00 | 1410.8           | 1255.6          |   | 127.21         | 5.4737    | 1.990                           |
| 20.00 | 1419.0           | 1263.7          |   | 127.29         | 5.2500    | 2.013                           |
| 21.00 | 1426.5           | 1271.3          |   | 127.36         | 5.0476    | 2.035                           |
| 22.00 | 1433.6           | 1278.3          |   | 127.44         | 4.8636    | 2.055                           |
| 23.00 | 1440.3           | 1285.0          |   | 127.52         | 4.6957    | 2.074                           |
| 24.00 | 1446.7           | 1291.4          |   | 127.56         | 4.5417    | 2.093                           |
| 25.00 | 1452.7           | 1297.4          |   | 127.64         | 4.4000    | 2.110                           |
| 26.00 | 1458.6           | 1303.3          |   | 127.69         | 4.2692    | 2.127                           |
| 27.00 | 1464.0           | 1308.8          |   | 127.76         | 4.1481    | 2.143                           |
| 28.00 | 1469.4           | 1314.1          |   | 127.79         | 4.0357    | 2.159                           |
| 29.00 | 1474.5           | 1319.3          |   | 127.79         | 3.9310    | 2.174                           |
| 30.00 | 1479.4           | 1324.1          |   | 127.79         | 3.8333    | 2.189                           |
| 31.00 | 1484.0           | 1328.7          |   | 127.79         | 3.7419    | 2.202                           |
| 32.00 | 1488.6           | 1333.4          |   | 127.79         | 3.6562    | 2.216                           |
| 33.00 | 1493.0           | 1337.7          |   | 127.80         | 3.5758    | 2.229                           |
| 34.00 | 1497.0           | 1341.8          |   | 127.81         | 3.5000    | 2.241                           |
| 35.00 | 1501.1           | 1345.9          |   | 127.89         | 3.4286    | 2.253                           |
| 36.00 | 1505.1           | 1349.8          |   | 127.92         | 3.3611    | 2.265                           |
| 37.00 | 1508.8           | 1353.5          |   | 127.95         | 3.2973    | 2.276                           |
| 38.00 | 1512.5           | 1357.2          |   | 127.97         | 3.2368    | 2.288                           |
| 39.00 | 1515.7           | 1360.5          |   | 128.00         | 3.1795    | 2.297                           |
| 40.00 | 1519.1           | 1363.8          |   | 128.02         | 3.1250    | 2.308                           |
| 41.00 | 1522.3           | 1367.0          |   | 128.03         | 3.0732    | 2.317                           |
| 42.00 | 1525.3           | 1370.0          |   | 128.05         | 3.0238    | 2.327                           |
| 43.00 | 1528.1           | 1372.9          |   | 128.06         | 2.9767    | 2.335                           |
| 44.00 | 1531.0           | 1375.7          |   | 128.07         | 2.9318    | 2.344                           |
| 45.00 | 1533.7           | 1378.4          |   | 128.09         | 2.8889    | 2.352                           |
| 46.00 | 1536.3           | 1381.0          |   | 128.11         | 2.8478    | 2.360                           |
| 47.00 | 1538.8           | 1383.6          |   | 128.12         | 2.8085    | 2.368                           |
| 48.00 | 1541.2           | 1385.9          |   | 128.12         | 2.7708    | 2.375                           |
| 49.00 | 1543.4           | 1388.2          |   | 128.14         | 2.7347    | 2.382                           |
| 50.00 | 1545.5           | 1390.3          |   | 128.14         | 2.7000    | 2.389                           |
| 51.00 | 1547.7           | 1392.4          |   | 128.16         | 2.6667    | 2.395                           |
| 52.00 | 1549.7           | 1394.5          |   | 128.17         | 2.6346    | 2.402                           |
| 53.00 | 1551.6           | 1396.3          |   | 128.18         | 2.6038    | 2.407                           |
| 54.00 | 1553.4           | 1398.2          |   | 128.19         | 2.5741    | 2.413                           |

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7841 DST#2 Hickman #D-2 Oxy Usa. Inc.

DATE: 03/21/96

TIME: 14:35:13

| Time   | Pressure<br>PSIg | delta P<br>PSIg | Temp.<br>DEG F | (T+dT)/dT | P <sup>2</sup> /10 <sup>6</sup> |
|--------|------------------|-----------------|----------------|-----------|---------------------------------|
| 55.00  | 1555.2           | 1399.9          | 128.20         | 2.5455    | 2.419                           |
| 56.00  | 1556.9           | 1401.6          | 128.19         | 2.5179    | 2.424                           |
| 57.00  | 1558.4           | 1403.2          | 128.21         | 2.4912    | 2.429                           |
| 58.00  | 1560.0           | 1404.7          | 128.22         | 2.4655    | 2.433                           |
| 59.00  | 1561.4           | 1406.1          | 128.22         | 2.4407    | 2.438                           |
| 60.00  | 1562.9           | 1407.6          | 128.23         | 2.4167    | 2.443                           |
| 61.00  | 1564.4           | 1409.1          | 128.24         | 2.3934    | 2.447                           |
| 62.00  | 1565.7           | 1410.4          | 128.24         | 2.3710    | 2.451                           |
| 63.00  | 1566.9           | 1411.7          | 128.22         | 2.3492    | 2.455                           |
| 64.00  | 1568.1           | 1412.8          | 128.24         | 2.3281    | 2.459                           |
| 65.00  | 1569.3           | 1414.0          | 128.24         | 2.3077    | 2.463                           |
| 66.00  | 1570.4           | 1415.1          | 128.26         | 2.2879    | 2.466                           |
| 67.00  | 1571.5           | 1416.3          | 128.23         | 2.2687    | 2.470                           |
| 68.00  | 1572.6           | 1417.4          | 128.25         | 2.2500    | 2.473                           |
| 69.00  | 1573.6           | 1418.3          | 128.27         | 2.2319    | 2.476                           |
| 70.00  | 1574.6           | 1419.3          | 128.27         | 2.2143    | 2.479                           |
| 71.00  | 1575.6           | 1420.3          | 128.28         | 2.1972    | 2.482                           |
| 72.00  | 1576.5           | 1421.2          | 128.25         | 2.1806    | 2.485                           |
| 73.00  | 1577.3           | 1422.1          | 128.28         | 2.1644    | 2.488                           |
| 74.00  | 1578.1           | 1422.8          | 128.27         | 2.1486    | 2.490                           |
| 75.00  | 1578.9           | 1423.7          | 128.28         | 2.1333    | 2.493                           |
| 76.00  | 1579.8           | 1424.5          | 128.28         | 2.1184    | 2.496                           |
| 77.00  | 1580.4           | 1425.2          | 128.29         | 2.1039    | 2.498                           |
| 78.00  | 1581.3           | 1426.0          | 128.29         | 2.0897    | 2.500                           |
| 79.00  | 1582.0           | 1426.8          | 128.28         | 2.0759    | 2.503                           |
| 80.00  | 1582.7           | 1427.4          | 128.29         | 2.0625    | 2.505                           |
| 81.00  | 1583.4           | 1428.1          | 128.30         | 2.0494    | 2.507                           |
| 82.00  | 1584.1           | 1428.9          | 128.29         | 2.0366    | 2.509                           |
| 83.00  | 1584.7           | 1429.5          | 128.31         | 2.0241    | 2.511                           |
| 84.00  | 1585.3           | 1430.0          | 128.29         | 2.0119    | 2.513                           |
| 85.00  | 1586.0           | 1430.7          | 128.30         | 2.0000    | 2.515                           |
| 86.00  | 1586.6           | 1431.3          | 128.31         | 1.9884    | 2.517                           |
| 87.00  | 1587.2           | 1431.9          | 128.29         | 1.9770    | 2.519                           |
| 88.00  | 1587.7           | 1432.5          | 128.30         | 1.9659    | 2.521                           |
| 89.00  | 1588.2           | 1432.9          | 128.30         | 1.9551    | 2.522                           |
| 90.00  | 1588.7           | 1433.4          | 128.32         | 1.9444    | 2.524                           |
| 91.00  | 1589.2           | 1433.9          | 128.32         | 1.9341    | 2.525                           |
| 92.00  | 1589.7           | 1434.4          | 128.31         | 1.9239    | 2.527                           |
| 93.00  | 1590.2           | 1434.9          | 128.32         | 1.9140    | 2.529                           |
| 94.00  | 1590.6           | 1435.3          | 128.33         | 1.9043    | 2.530                           |
| 95.00  | 1590.9           | 1435.7          | 128.34         | 1.8947    | 2.531                           |
| 96.00  | 1591.4           | 1436.2          | 128.31         | 1.8854    | 2.533                           |
| 97.00  | 1591.9           | 1436.6          | 128.31         | 1.8763    | 2.534                           |
| 98.00  | 1592.2           | 1436.9          | 128.31         | 1.8673    | 2.535                           |
| 99.00  | 1592.7           | 1437.4          | 128.32         | 1.8586    | 2.537                           |
| 100.00 | 1592.9           | 1437.7          | 128.32         | 1.8500    | 2.537                           |
| 101.00 | 1593.4           | 1438.2          | 128.32         | 1.8416    | 2.539                           |
| 102.00 | 1593.8           | 1438.5          | 128.32         | 1.8333    | 2.540                           |
| 103.00 | 1594.1           | 1438.9          | 128.32         | 1.8252    | 2.541                           |
| 104.00 | 1594.5           | 1439.3          | 128.32         | 1.8173    | 2.543                           |
| 105.00 | 1594.9           | 1439.6          | 128.32         | 1.8095    | 2.544                           |

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 7841 DST#2 Hickman #D-2 Oxy Usa. Inc.

DATE: 03/21/96

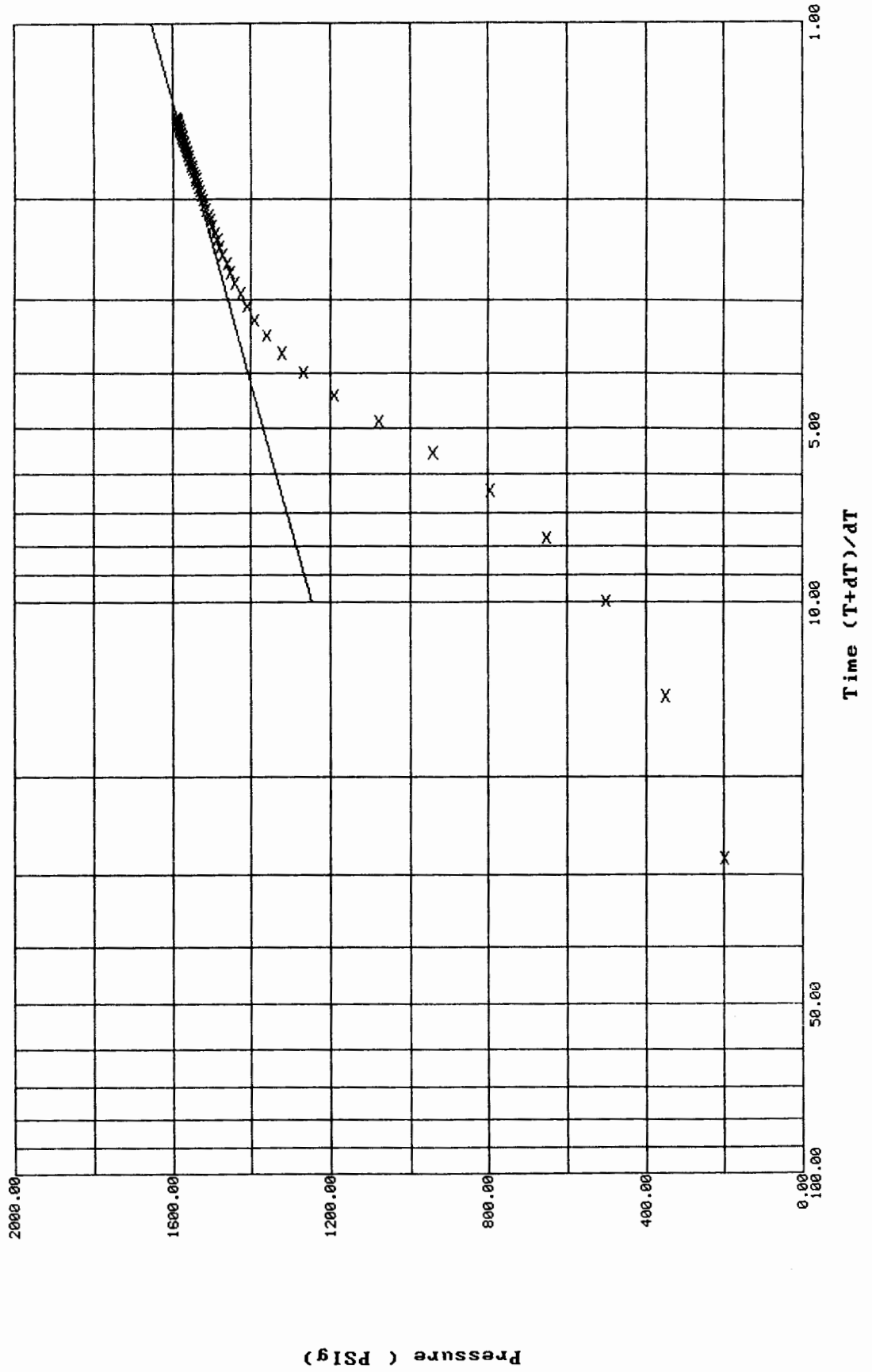
TIME: 14:35:13  
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|                     | Time   | Pressure<br>PSig | delta P<br>PSig | Temp.<br>DEG F | (T+dT)/dT | P <sup>2</sup> /10 <sup>6</sup> |
|---------------------|--------|------------------|-----------------|----------------|-----------|---------------------------------|
|                     | 106.00 | 1595.1           | 1439.9          | 128.32         | 1.8019    | 2.544                           |
|                     | 107.00 | 1595.5           | 1440.2          | 128.32         | 1.7944    | 2.545                           |
|                     | 108.00 | 1595.7           | 1440.5          | 128.32         | 1.7870    | 2.546                           |
|                     | 109.00 | 1596.0           | 1440.8          | 128.33         | 1.7798    | 2.547                           |
|                     | 110.00 | 1596.5           | 1441.2          | 128.32         | 1.7727    | 2.549                           |
|                     | 111.00 | 1596.6           | 1441.4          | 128.30         | 1.7658    | 2.549                           |
|                     | 112.00 | 1597.0           | 1441.7          | 128.32         | 1.7589    | 2.550                           |
|                     | 113.00 | 1597.2           | 1442.0          | 128.33         | 1.7522    | 2.551                           |
|                     | 114.00 | 1597.5           | 1442.2          | 128.32         | 1.7456    | 2.552                           |
|                     | 115.00 | 1597.7           | 1442.5          | 128.32         | 1.7391    | 2.553                           |
|                     | 116.00 | 1598.1           | 1442.8          | 128.33         | 1.7328    | 2.554                           |
|                     | 117.00 | 1598.3           | 1443.1          | 128.33         | 1.7265    | 2.555                           |
|                     | 118.00 | 1598.5           | 1443.2          | 128.32         | 1.7203    | 2.555                           |
|                     | 119.00 | 1598.7           | 1443.5          | 128.33         | 1.7143    | 2.556                           |
|                     | 120.00 | 1599.0           | 1443.7          | 128.32         | 1.7083    | 2.557                           |
| ***** End Shut-in 2 | 121.00 | 1599.2           | 1443.9          | 128.33         | 1.7025    | 2.557                           |
| ***** Final Hydro.  | 385.00 | 2470.7           | 0.0             | 128.50         |           |                                 |

# Horner Plot: shut-in #1

7841 DST#2 Hickman #D-2 Oxy Usa. Inc.

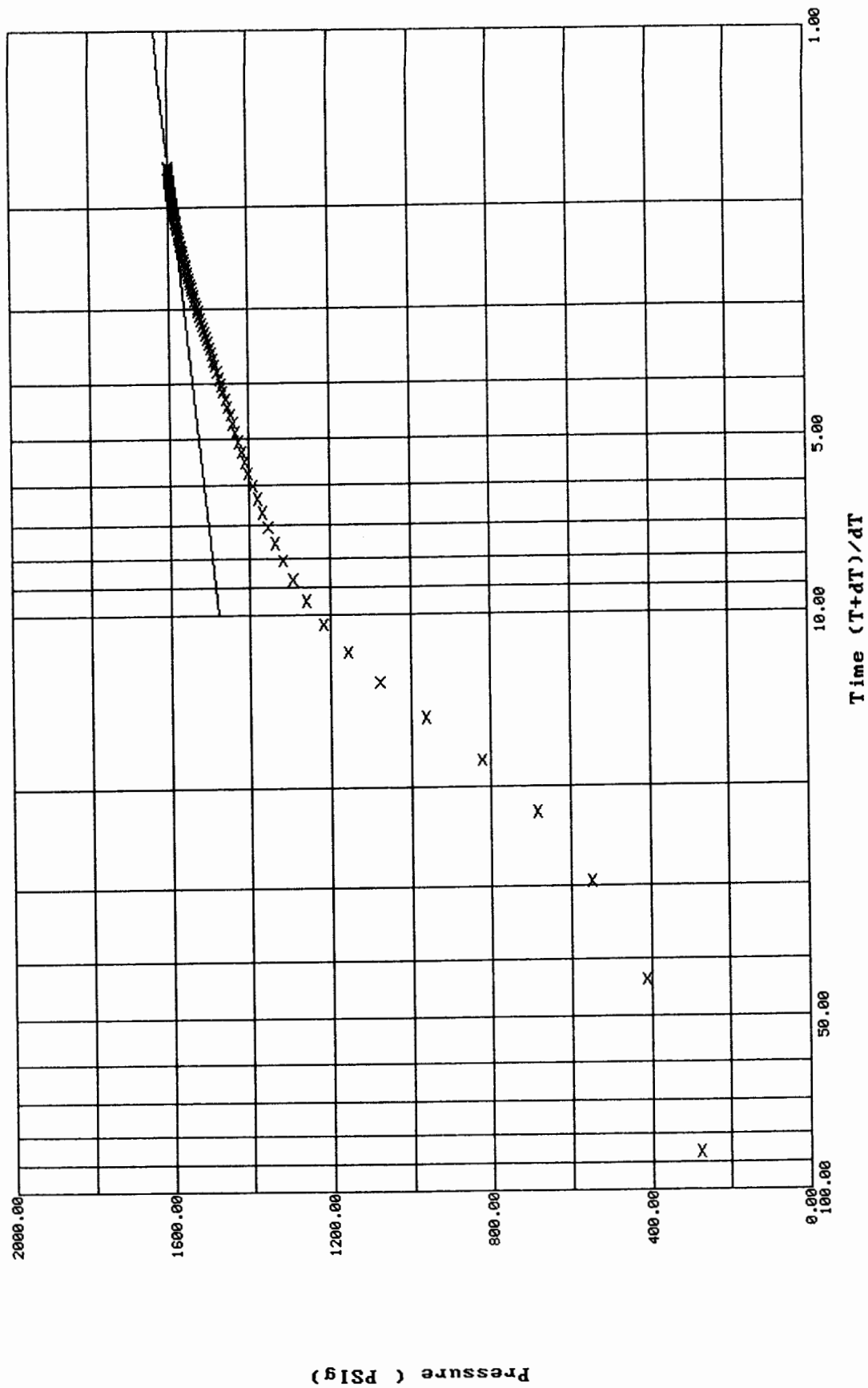
Slope: 407.9441 PSig/cycle  
 Ext. Pressure: 1655.0790 PSig



# Horner Plot: shut-in #2

7841 DST#2 Hickman #D-2 Oxy Usa, Inc.

Slope: 156.8251 PSig/cycle  
Ext. Pressure: 1635.4417 PSig



\*\*\* TOOL DIAGRAM \*\*\* CONVENTIONAL

WELL NAME: Hickman #D-2

LOCATION : 28-30S-33W Haskell Cty KS

TICKET No. 7841 D.S.T. No. 2 DATE 3-21-96

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 30 ft.

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 40 ft.

TOTAL TOOL ..... 70 ft.

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY ..... 70 ft.

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands85 Single 1 Total 5230 ft.

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5300 ft.

TOTAL DEPTH ..... 5271 ft.

TOTAL DRILL PIPE ABOVE K.B. .... 29 ft.

REMARKS:

FLUID SAMPLER DATA

SAMPLER RECOVERY -

Gas 13.2 cu ft, Pressure 1325 PSI,  
Total 4000 ml

PIT MUD ANALYSIS -

Chlorides 1200 ppm; Viscosity 46, Mud Wt 9.0

|                        |      |
|------------------------|------|
| P.O. SUB               |      |
| C.O. SUB 1ft           | 5201 |
| S.I. TOOL 5ft          | 5207 |
| 3ft sampler            | 5210 |
| HMV HYD. 5ft           | 5215 |
| JARS 5ft               | 5220 |
| SAFETY JOINT 2ft       | 5222 |
| PACKER Top Packer      | 5226 |
| PACKER Bottom Packer   | 5231 |
| DEPTH                  |      |
| STUBB 1ft              | 5232 |
| ANCHOR 1ft perf.       | 5233 |
| Alpine Rec.            | 5234 |
| 6ft pickup sub.        | 5239 |
| 25ft of perf.          | 5264 |
| T.C.                   |      |
| DEPTH                  |      |
| 4ft perf.              | 5268 |
| AK-1 Rec.              | 5268 |
| BULLNOSE 3ft bull plug |      |
| T.D.                   | 5271 |



**TRILOBITE TESTING L.L.C.**  
P.O. Box 362 • Hays, Kansas 67601

**Test Ticket**

No. 7841

|   |                          |   |                     |
|---|--------------------------|---|---------------------|
| Well Name & No. <u>Hickman #D-2</u>                                 |                          | Test No. <u>2</u>   | Date <u>3-21-96</u> |
| Company <u>Oxy USA Inc.</u>   |                          | Zone Tested <u>Morrow</u>   |                     |
| Address <u>Box 26100 O.K. City Ok.</u>                              |                          | Elevation <u>293961 2950 KB</u>                                     |                     |
| Co. Rep./Geo. <u>Tim Hedrick</u>                                    |                          | Cont. <u>Val Casey #1</u>   |                     |
| Location: Sec. <u>28</u> Twp. <u>30 S</u> Rge. <u>33 W</u>          |                          | Co. <u>Haskell</u> State <u>KS</u>                                  |                     |
| Est. Ft. of Pay _____   |                          | Evaluation _____  |                     |
| No. of Copies <u>5</u>  | Distribution Sheet _____ | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Turnkey _____       |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                          | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                     |

|                                    |   |
|------------------------------------|---|
| Interval Tested <u>5231 - 5271</u> | Drill Pipe Size <u>4 1/2 x-160k</u>                 |
| Anchor Length <u>40'</u>           | Top Choke — 1" _____ Bottom Choke — 3/4" _____      |
| Top Packer Depth <u>5226</u>       | Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____ |
| Bottom Packer Depth <u>5231</u>    | Wt. Pipe I.D. — 2.7 Ft. Run _____                   |
| Total Depth <u>5271</u>            | Drill Collar — 2.25 Ft. Run _____                   |
| Mud Wt. <u>9.0</u> lb/gal.         | Viscosity <u>46</u> Filtrate <u>8.8</u>             |

Tool Open @ 4:13pm Initial Blow Strong Blow B.O.B. in 2min. C.T.S. 14min  
F.S.I. Bled off 2in. No blow back  
 Final Blow Strong Blow B.O.B. soon as open tool.  
F.S.I. Bled off 2in. Had 1/2 in Blow Back.

|   |   |                       |
|---|---|-----------------------|
| Recovery — Total Feet <u>510</u>            | Feet of Gas in Pipe _____                                       | Flush Tool? <u>NO</u> |
| Rec. <u>150</u> Feet Of <u>Muddy Oil</u>    | %gas <u>70</u> %oil _____ %water <u>30</u> %mud _____           |                       |
| Rec. _____ Feet Of _____                    | %gas _____ %oil _____ %water _____ %mud _____                   |                       |
| Rec. <u>180</u> Feet Of <u>Gassy Mt Oil</u> | <u>60</u> %gas <u>30</u> %oil _____ %water <u>10</u> %mud _____ |                       |
| Rec. _____ Feet Of _____                    | %gas _____ %oil _____ %water _____ %mud _____                   |                       |
| Rec. <u>180</u> Feet Of <u>Gassy Oil</u>    | <u>45</u> %gas <u>55</u> %oil _____ %water _____ %mud _____     |                       |

BHT 122 °F Gravity 39 API @ 75 °F Corrected Gravity 38.1 API  
 RW AK1 Chlorides \_\_\_\_\_ ppm Recovery Chlorides 1200 ppm System

|   |                                |  |
|---|--------------------------------|--|
| (A) Initial Hydrostatic Mud <u>2530</u>   <u>2543</u> PSI   | AK1 Recorder No. <u>2351</u>   | Range <u>4,995</u>   |
| (B) First Initial Flow Pressure <u>62</u>   <u>86</u> PSI   | @ (depth) <u>5234</u>          | w/Clock No. <u>Electronic</u>                                    |
| (C) First Final Flow Pressure <u>84</u>   <u>108</u> PSI    | AK1 Recorder No. <u>1055</u>   | Range <u>4,050</u>   |
| (D) Initial Shut-In Pressure <u>1589</u>   <u>1579</u> PSI  | @ (depth) <u>5268</u>          | w/Clock No. <u>30418</u>   |
| (E) Second Initial Flow Pressure <u>86</u>   <u>108</u> PSI | AK1 Recorder No. _____         | Range _____  |
| (F) Second Final Flow Pressure <u>155</u>   <u>161</u> PSI  | @ (depth) _____                | w/Clock No. _____  |
| (G) Final Shut-In Pressure <u>1598</u>   <u>1589</u> PSI    | Initial Opening <u>30 min.</u> | Test <input checked="" type="checkbox"/> Conventional <u>700</u> |
| (H) Final Hydrostatic Mud <u>2451</u>   <u>2472</u> PSI     | Initial Shut-In <u>60 min.</u> | Jars <input checked="" type="checkbox"/> <u>200</u>              |

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By [Signature]  
 Our Representative [Signature]

Final Flow 60 min. Safety Joint  50  
 Final Shut-In 120 min. Straddle \_\_\_\_\_  
 Circ. Sub  N/C  
 Sampler  200  
 Extra Packer \_\_\_\_\_  
 Other Electronic Rec 4150  
 TOTAL PRICE \$ 1360

# TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 7841 Date 3-21-96  
Company Name Oxy USA Inc  
Lease Hickman # 0-2 Test No. DST # 2  
County Haskell Sec. 28 Twp. 30S Rng. 33W

### SAMPLER RECOVERY

Gas 13.2 Cubic Feet ML  
Oil \_\_\_\_\_ ML  
Mud \_\_\_\_\_ ML  
Water \_\_\_\_\_ ML  
Other \_\_\_\_\_ ML  
Pressure 1325 PSI  
Total 4,000 ml. ML

### PIT MUD ANALYSIS

Chlorides 1200 ppm.  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Viscosity 46  
Mud Weight 9.0  
Filtrate \_\_\_\_\_  
Other \_\_\_\_\_

### SAMPLER ANALYSIS

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
Gravity \_\_\_\_\_ corrected @ 60 F

### PIPE RECOVERY

TOP  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
MIDDLE  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
BOTTOM  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.