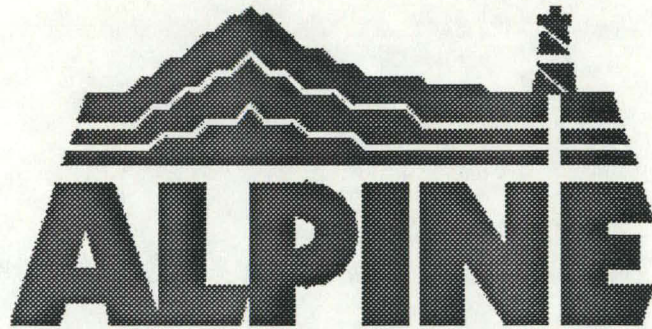




## ***Drill Stem Test Report***

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Prepared for: **PARAMOUNT RESOURCES**  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

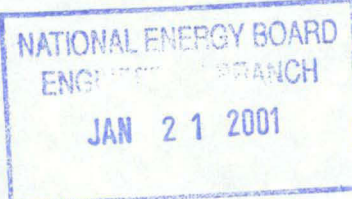
**Well Name: PARA ET AL FORT LIARD**

**Location: N-01-60-10-123-15**

**Test Date: 01/09/2001**

**Job Ticket #: D2-9625      DST#: 4**

N-01-60-10-123-15



DST#4



## Drill Stem Testing Report

Company: PARAMOUNT RESOURCES LTD.  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

Job Ticket #: D2-9625 DST#: 4  
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD  
Location: N-01-60-10-123-15

Contact: WILBERT CALLIHOO

### General Information:

Test Type: INFLATE RESET  
Interval: 1717.00m - 1738.00m  
Formation: MATTSON  
KB Elevation: 492.10m  
Ground Elevation: 487.00m  
Total Depth: 1940.00m  
Test Mode: Gas

Tester: D. ROSS  
Truck No.: Unit 677  
Contractor: PRECISION  
Rig No.: 387  
Hole Diameter: 222mm  
Hole Condition: GOOD  
Bottom Hole Temperature: 60.10 C

### Electronic Recorder Information:

OUTSIDE  
Recorder #: 126

Range: 35000 kPa  
Depth: 1719.92 m

OUTSIDE  
Recorder #: 124

Range: 70000 kPa  
Depth: 1719.92 m

#### Flag Points:

|                       | Time: | Pressure: |
|-----------------------|-------|-----------|
| A Initial Hydrostatic | 0.00  | 20062.7   |
| B Start of 1st Flow   | 0.00  | 13984.0   |
| C End of 1st Flow     | 42.00 | 14237.4   |
| D End of 1st Shutin   | 28.00 | 17194.6   |
| E Start of 2nd Flow   | 0.00  | 13686.5   |
| F End of 2nd Flow     | 55.00 | 14092.8   |
| G End of 2nd Shutin   | 48.00 | 17157.6   |
| Q Final Hydrostatic   | 0.00  | 19687.7   |

### Test Run Information:

Start Time: 1200hrs  
Reached Test Depth: 2140hrs  
Pull Out Time: 30hrs  
Tool Out Of Hole: 1000hrs

Weight set on Packers: 8000.00daN  
Weight to free Packers: 8000.00daN  
Initial String Weight: 45000.00daN  
Unseated String Weight: 45000.00daN

Tool Chased Dist: 0.00m Water Loss: 6.20cm<sup>3</sup>  
Mud Type: GEL CHEMICAL Mud Drop: NO  
Mud Weight: 1160.00kg/m<sup>3</sup> VIS: 76.00S/L  
Amount of fill: 0.00m Filter Cake: 1.60mm  
Amt of cushion: 0.00 Pump Time: 30min  
Type of cushion: Reversed Out: NO

### General Remarks:

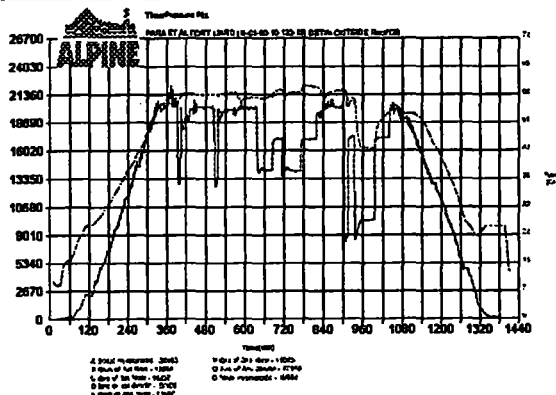
This is the second of three tests run on the same trip in the hole. Mechanically successful. \*Test results suggest excellent permeability within the zone tested.

PREFLOW: Gas to surface immediately.

FINAL FLOW: Gas to surface immediately, misting mud throughout.

\*\*\*See gas volume charts for gas rates.

NOTE - See Alpine Telemetry report for real time data acquisition.



### Recovery Description:

Total fluid recovery for DST #3 through #5 was 55 meters, consisting of 25 meters condensate and 30 meters fresh water.

Gas to surface.

Gas Bomb: 0 Sampler: 0  
Fluid Sample: 0 Sent to: SEE DST #5



# Drill Stem Testing - Tool Diagram / Description

Company: PARAMOUNT RESOURCES LTD.  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

Job Ticket #: D2-9625 DST#: 4  
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO

Location: N-01-60-10-123-15

## Inflate Straddle

|                                     |          |
|-------------------------------------|----------|
| Drill Collar Stands:                | 3        |
| Drill Collar Singles:               | 0        |
| Drill Pipe Stands:                  | 66       |
| Drill Pipe Singles:                 | 1        |
| Heavy Wt. Pipe Stands:              | 20       |
| Heavy Wt. Pipe Singles:             | 0        |
| Total Drill Collars/Pipe and Tools: | 1720.57m |
| Total Drill Pipe Above K.B.:        | 3.57m    |
| Total Depth:                        | 1940m    |

## Tool / Drill Stem Information:

|                               |         |     |
|-------------------------------|---------|-----|
| Tool Weight:                  | 2000.00 | daN |
| Drill Collar Inside Diameter: | 54.00   | mm  |
| Drill Collar Length:          | 54.49   | m   |
| Drill Pipe Inside Diameter:   | 97.00   | mm  |
| Drill Pipe Length:            | 1269.36 | m   |
| Heavy Weight Pipe Diameter:   | 69.00   | mm  |
| Heavy Weight Pipe Length:     | 372.12  | m   |
| Bottom Choke Diameter:        | 12.70   | mm  |
| Number of Packers: 2 Dia.:    | 196.90  | mm  |

24.60m

49.93m

## Tool Remarks:

Depth:  
1717m

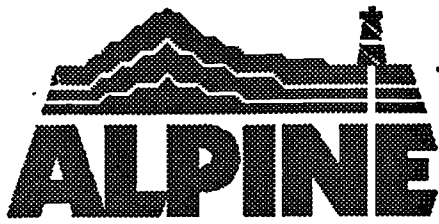
20.76m

Depth:  
1738m

4.57m

Total Depth: 1940.00m

| Item            | Length |
|-----------------|--------|
| P.O. Sub        | 0.31   |
| Bit Sub         | 1.04   |
| Double Pin      | 0.31   |
| P.O. Sub        | 0.31   |
| REC#063         | 1.50   |
| HMV Stroke      | 2.18   |
| Sampler         | 1.10   |
| REC#070         | 1.50   |
| Telemetry Tool  | 5.80   |
| Jars            | 1.82   |
| Safety Joint    | 0.66   |
| Pump            | 2.04   |
| Screen          | 1.18   |
| Valve           | 2.23   |
| Deflate         | 0.85   |
| Packer          | 1.78   |
| Stub            | 0.72   |
| ASE Carrier     | 2.20   |
| REC#124         |        |
| REC#126         |        |
| Bypass Hanger   | 0.42   |
| C.O. Sub        | 0.30   |
| DRILL COLLAR    | 9.24   |
| C.O. Sub        | 0.30   |
| Blank Spacing   | 6.08   |
| Bypass Receiver | 0.78   |
| Stub            | 0.72   |
| Packer          | 1.78   |
| Extension Sub   | 0.71   |
| Drag Spring     | 2.08   |



## **Drill Stem Testing - Gas Recovery Measurements**

Company: PARAMOUNT RESOURCES LTD.  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

Job Ticket #: D2-9625      DST#: 4  
Test Date: 01/09/2001      1200hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO

Location: N-01-60-10-123-15

### **Gas Measurements for Flow # 1**

Gas Recovery Measured With:

Willis Choke

| Time (min.) | Orifice (mm) | Pressure (kPa) | Rate (m <sup>3</sup> /d) |
|-------------|--------------|----------------|--------------------------|
| 20          | 22.23        | 4700           | 431280.00                |
| 25          | 22.23        | 4800           | 439926.00                |
| 35          | 22.23        | 4800           | 439926.00                |
| 40          | 22.23        | 4900           | 449212.00                |

### **Gas Measurements for Flow # 2**

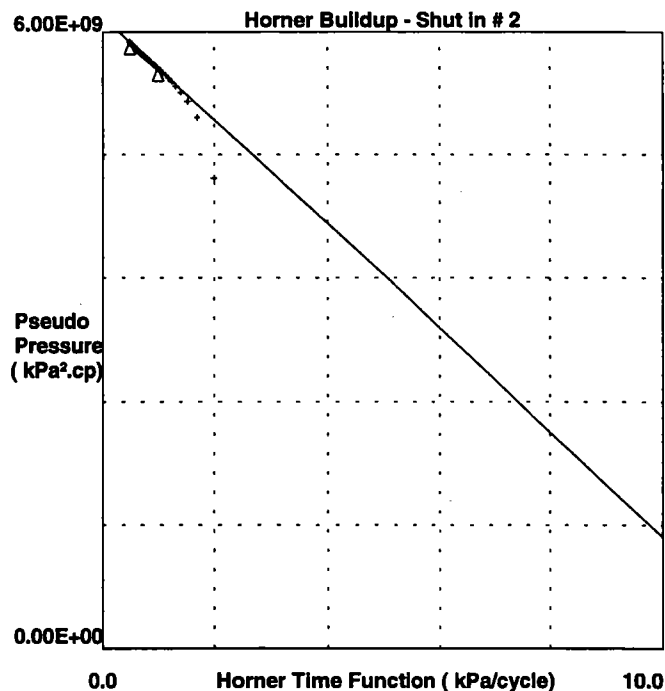
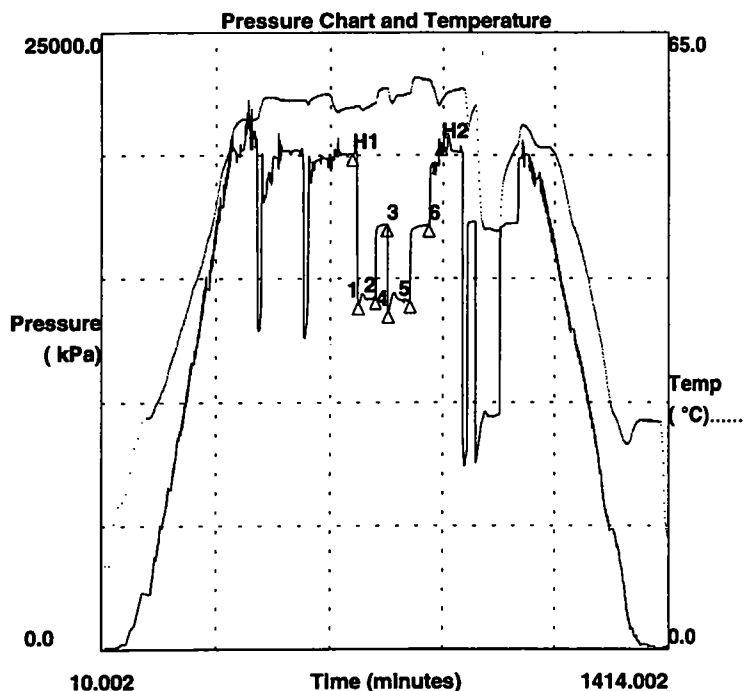
Gas Recovery Measured With:

Willis Choke

| Time (min.) | Orifice (mm) | Pressure (kPa) | Rate (m <sup>3</sup> /d) |
|-------------|--------------|----------------|--------------------------|
| 10          | 22.23        | 4800           | 439926.00                |
| 20          | 22.23        | 4800           | 439926.00                |
| 30          | 22.23        | 4900           | 449212.00                |
| 40          | 22.23        | 4900           | 449212.00                |
| 50          | 22.23        | 5000           | 457679.00                |

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

## General Summary



| Event Summary:           | Time (min) | Durations (min) | Pressure (kPa) |
|--------------------------|------------|-----------------|----------------|
| 1. Start Initial Flow    | 641.00     |                 | 14031.41       |
| 2. Start Initial Shut in | 684.00     | 43.00           | 14237.44       |
| 3. End Initial Shut in   | 712.00     | 28.00           | 17194.65       |
| 4. Start Main Flow       | 715.00     |                 | 13686.50       |
| 5. Start Main Shut in    | 770.00     | 55.00           | 14092.76       |
| 6. End Main Shut in      | 817.00     | 47.00           | 17156.45       |
| H1 Hydrostatic Initial   | 625.00     |                 | 20066.21       |
| H2 Hydrostatic Final     | 847.00     |                 | 20507.19       |

## RESULTS: Shut-in # 2

|                |                  |
|----------------|------------------|
| Perm-Thickness | 456.398 md.m     |
| Permeability   | 82.982 md        |
| Form. Pressure | 17275.7 kPa      |
| Skin           | 6.9              |
| AOF            | 1368.1 10³m³/day |
| Damage Ratio   | 1.77             |
| Distance       | 22.0 m           |
| Flowrate (GAS) | 457.7 10³m³/day  |

## GAS and Formation Properties

|                    |                |
|--------------------|----------------|
| Viscosity          | 0.017 cp       |
| Volume Factor 1/Bg | 0.007          |
| Compressibility    | 4.06E-05 1/kPa |
| Porosity           | 0.18           |
| Water Saturation   | 0.24           |
| Thickness          | 5.5 m          |

## Depletion Summary: Shut-In 1 vs 2

|                         |          |
|-------------------------|----------|
| Pressure Drop=          | 0.45 kPa |
| Percent Drop (Extrap.)= | 0.0 %    |
| Percent Drop (Raw)=     | 0.2 %    |

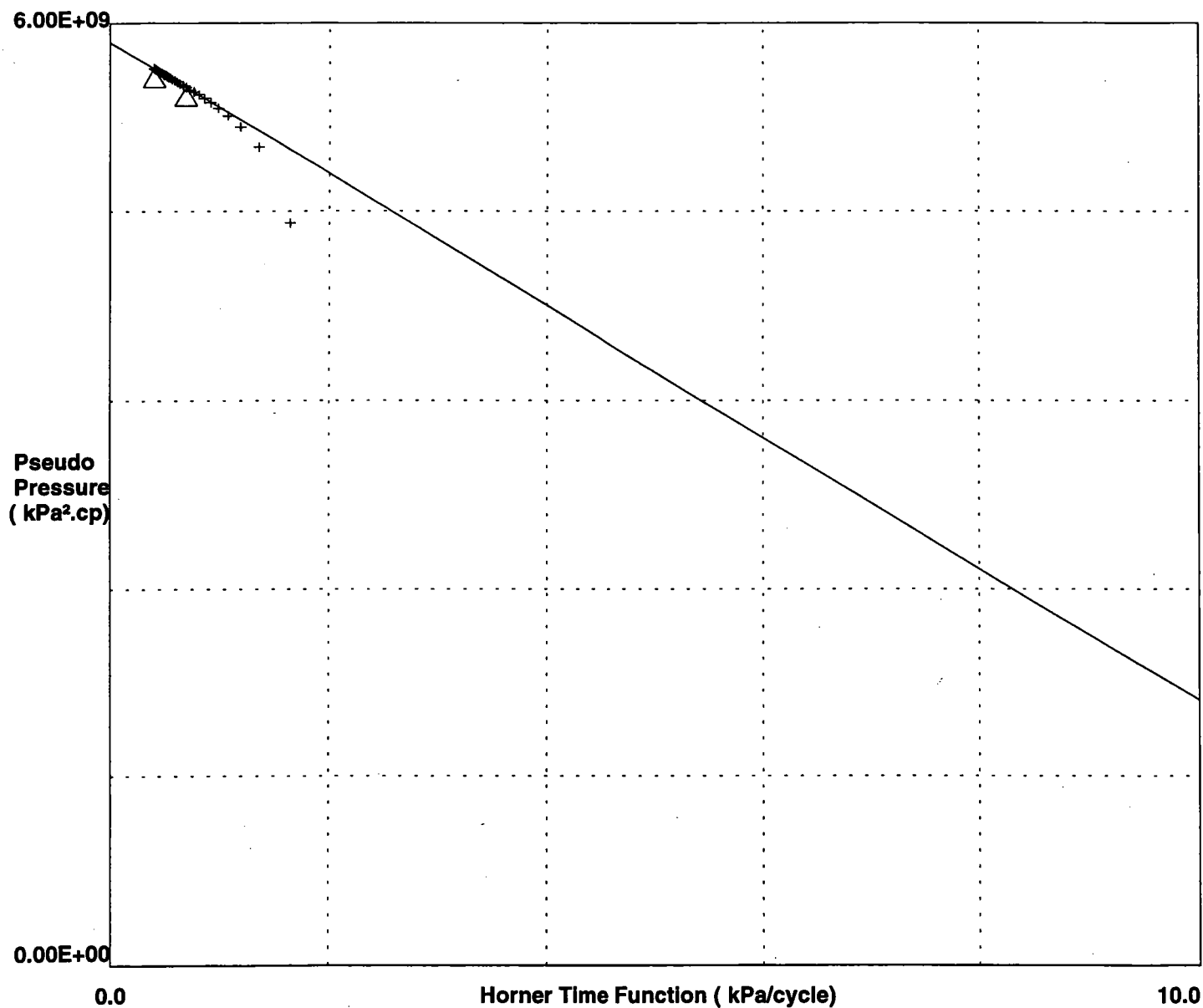
## RESULTS: Shut-in # 1

|                |                  |
|----------------|------------------|
| Perm-Thickness | 541.274 md.m     |
| Permeability   | 98.413 md        |
| Form. Pressure | 17276.1 kPa      |
| Skin           | 9.2              |
| AOF            | 1400.1 10³m³/day |
| Damage Ratio   | 2.02             |
| Distance       | 23.9 m           |
| Flowrate (GAS) | 449.2 10³m³/day  |

## General Remarks

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

## Horner Plot Shut-in # 1



## RESULTS: Shut-in # 1

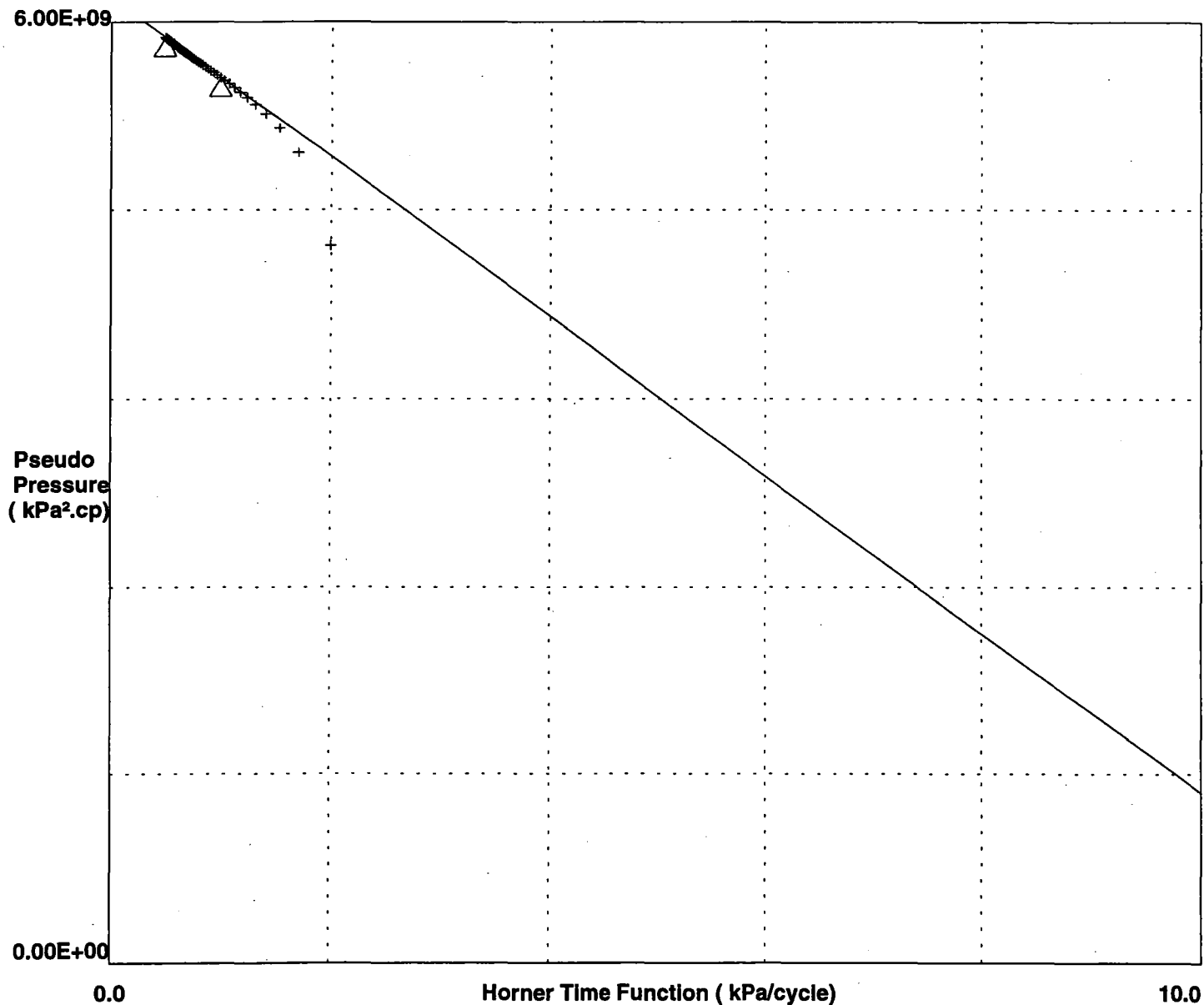
|                |                                     |
|----------------|-------------------------------------|
| Perm-Thickness | 541.274 md.m                        |
| Permeability   | 98.413 md                           |
| Form. Pressure | 17276.1 kPa                         |
| Skin           | 9.2                                 |
| AOF            | 1400.1 $10^3 \text{m}^3/\text{day}$ |
| Damage Ratio   | 2.02                                |
| Distance       | 23.9 m                              |
| Flowrate (GAS) | 449.2 $10^3 \text{m}^3/\text{day}$  |

## GAS and Formation Properties

|                       |                         |
|-----------------------|-------------------------|
| Viscosity             | 0.017 cp                |
| Volume Factor $1/B_g$ | 0.007                   |
| Compressibility       | $4.06\text{E}-05$ 1/kPa |
| Porosity              | 0.18                    |
| Water Saturation      | 0.24                    |
| Thickness             | 5.5 m                   |

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

## Horner Plot Shut-in # 2



## RESULTS: Shut-in # 2

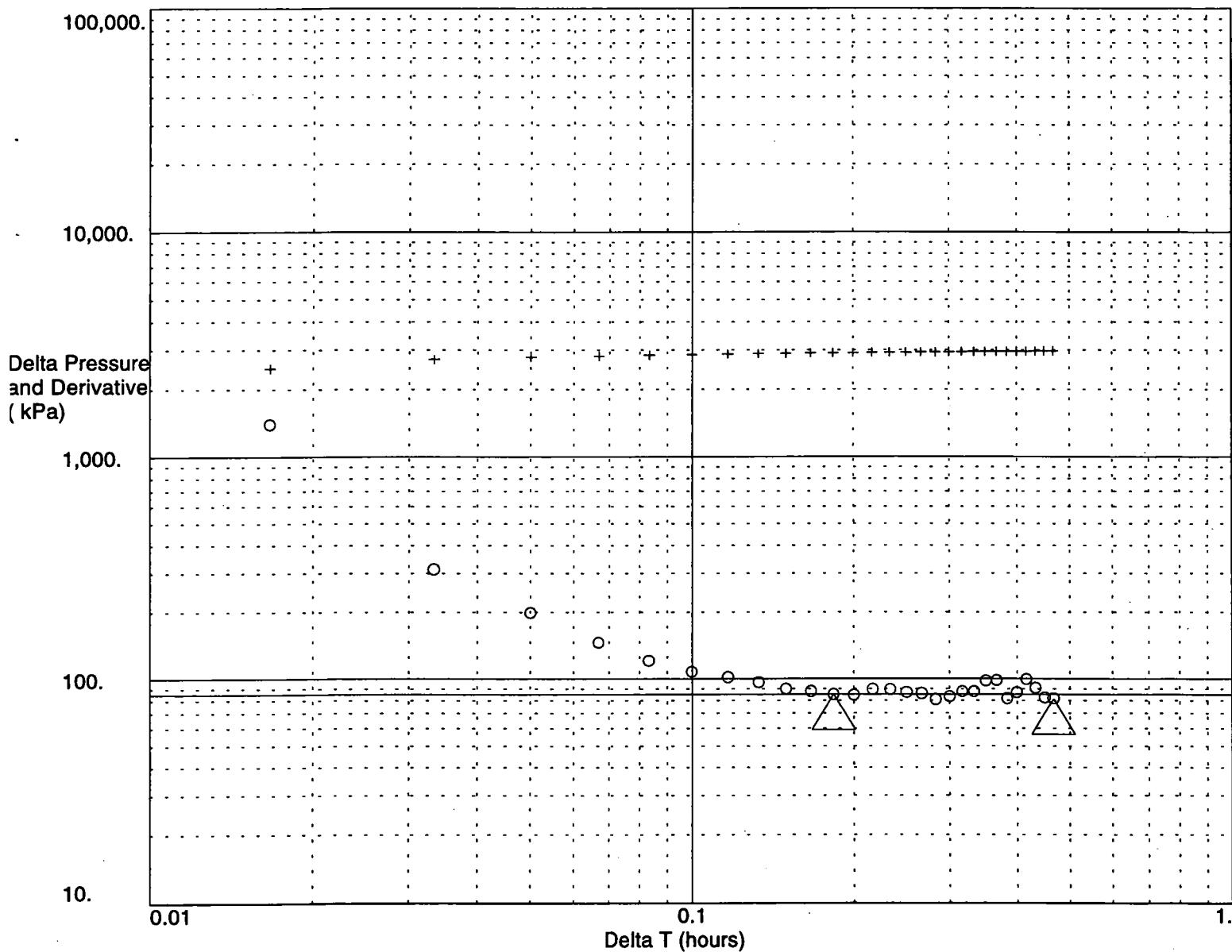
|                |                  |
|----------------|------------------|
| Perm-Thickness | 456.398 md.m     |
| Permeability   | 82.982 md        |
| Form. Pressure | 17275.7 kPa      |
| Skin           | 6.9              |
| AOF            | 1368.1 10³m³/day |
| Damage Ratio   | 1.77             |
| Distance       | 22.0 m           |
| Flowrate (GAS) | 457.7 10³m³/day  |

## GAS and Formation Properties

|                    |                |
|--------------------|----------------|
| Viscosity          | 0.017 cp       |
| Volume Factor 1/Bg | 0.007          |
| Compressibility    | 4.06E-05 1/kPa |
| Porosity           | 0.18           |
| Water Saturation   | 0.24           |
| Thickness          | 5.5 m          |

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

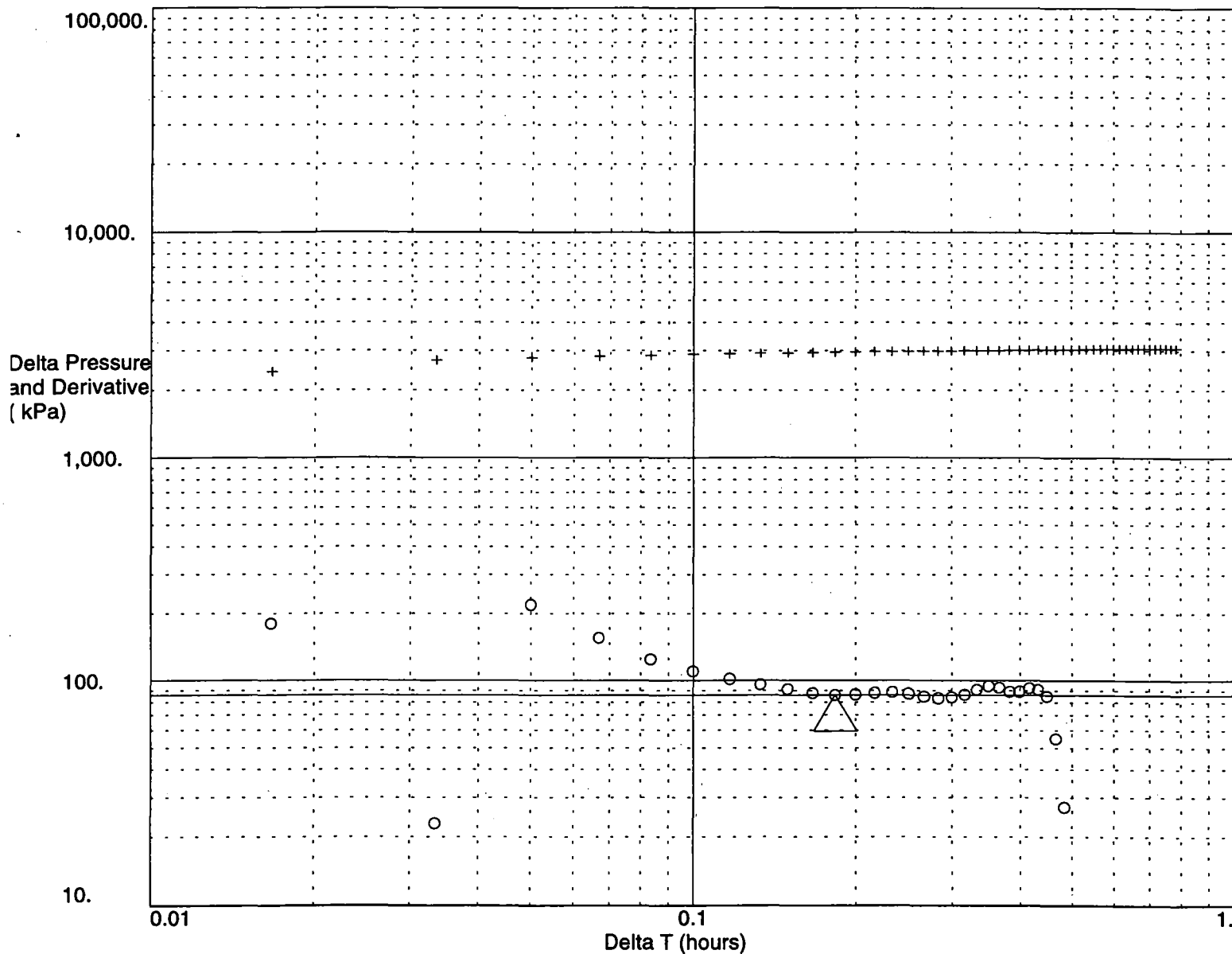
## Delta P vs Delta T and Derivative Shut-in # 1



| Identified Regime | From<br>Delta T (hr) | To<br>Delta T (hr); | Actual Slope | Ideal Slope |
|-------------------|----------------------|---------------------|--------------|-------------|
| Infinite Acting   | .18                  | .47                 | 0.030        | 0.00        |

Well: PARA ET AL FORT LIARD DST #4 Formation: MATTSON (1717-1738 m)

## Delta P vs Delta T and Derivative Shut-in # 2



| Identified Regime | From<br>Delta T (hr) | To<br>Delta T (hr); | Actual Slope | Ideal Slope |
|-------------------|----------------------|---------------------|--------------|-------------|
| Infinite Acting   | .18                  | .78                 | -4.528       | 0.00        |



## Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

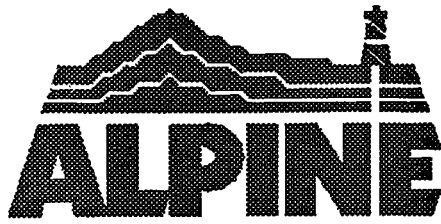
Job Ticket #: D2-9625 DST#: 4  
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO

Location: N-01-60-10-123-15

| Chart Label | Comments            | Time (Min.) | Delta P (KPag) | Pressure (KPag) | Abscissa (T+dt)/dt | Temp. (°C) | Chart Label | Comments          | Time (Min.) | Delta P (KPag) | Pressure (KPag) | Abscissa (T+dt)/dt | Temp. (°C) |
|-------------|---------------------|-------------|----------------|-----------------|--------------------|------------|-------------|-------------------|-------------|----------------|-----------------|--------------------|------------|
| A           | Initial Hydrostatic | 0.00        | 0.00           | 20062.70        |                    | 57.1       |             |                   | 36.00       | 209.50         | 14193.50        |                    | 57.5       |
| B           | Start of 1st Flow   | 0.00        | 0.00           | 13984.00        |                    | 57.3       |             |                   | 37.00       | 208.30         | 14192.30        |                    | 57.5       |
|             |                     | 1.00        | -59.10         | 13924.90        |                    | 57.2       |             |                   | 38.00       | 197.90         | 14181.90        |                    | 57.5       |
|             |                     | 2.00        | -5.80          | 13978.20        |                    | 57.2       |             |                   | 39.00       | 234.90         | 14218.90        |                    | 57.6       |
|             |                     | 3.00        | 99.50          | 14083.50        |                    | 57.1       |             |                   | 40.00       | 229.10         | 14213.10        |                    | 57.6       |
|             |                     | 4.00        | 94.90          | 14078.90        |                    | 57.0       |             |                   | 41.00       | 253.40         | 14237.40        |                    | 57.6       |
|             |                     | 5.00        | 187.50         | 14171.50        |                    | 56.9       | C           | End of 1st Flow   | 42.00       | 253.40         | 14237.40        |                    | 57.7       |
|             |                     | 6.00        | 232.60         | 14216.60        |                    | 56.9       |             |                   | 1.00        | 2478.10        | 16715.50        | 43.0000            | 57.7       |
|             |                     | 7.00        | 325.20         | 14309.20        |                    | 56.8       |             |                   | 2.00        | 2714.20        | 16951.60        | 22.0000            | 58.1       |
|             |                     | 8.00        | 361.10         | 14345.10        |                    | 56.8       |             |                   | 3.00        | 2776.70        | 17014.10        | 15.0000            | 58.3       |
|             |                     | 9.00        | 370.30         | 14354.30        |                    | 56.8       |             |                   | 4.00        | 2811.40        | 17048.80        | 11.5000            | 58.5       |
|             |                     | 10.00       | 390.00         | 14374.00        |                    | 56.8       |             |                   | 5.00        | 2834.60        | 17072.00        | 9.4000             | 58.7       |
|             |                     | 11.00       | 375.00         | 14359.00        |                    | 56.9       |             |                   | 6.00        | 2851.90        | 17089.30        | 8.0000             | 58.8       |
|             |                     | 12.00       | 315.90         | 14299.90        |                    | 56.9       |             |                   | 7.00        | 2864.70        | 17102.10        | 7.0000             | 58.8       |
|             |                     | 13.00       | 328.70         | 14312.70        |                    | 56.9       |             |                   | 8.00        | 2876.20        | 17113.60        | 6.2500             | 58.9       |
|             |                     | 14.00       | 310.10         | 14294.10        |                    | 57.0       |             |                   | 9.00        | 2885.50        | 17122.90        | 5.6667             | 58.9       |
|             |                     | 15.00       | 270.80         | 14254.80        |                    | 57.0       |             |                   | 10.00       | 2892.40        | 17129.80        | 5.2000             | 59.0       |
|             |                     | 16.00       | 185.10         | 14169.10        |                    | 57.0       |             |                   | 11.00       | 2899.40        | 17136.80        | 4.8182             | 59.0       |
|             |                     | 17.00       | 175.90         | 14159.90        |                    | 57.0       |             |                   | 12.00       | 2905.20        | 17142.60        | 4.5000             | 59.0       |
|             |                     | 18.00       | 140.00         | 14124.00        |                    | 57.1       |             |                   | 13.00       | 2909.80        | 17147.20        | 4.2308             | 59.0       |
|             |                     | 19.00       | 142.30         | 14126.30        |                    | 57.1       |             |                   | 14.00       | 2915.60        | 17153.00        | 4.0000             | 59.1       |
|             |                     | 20.00       | 173.60         | 14157.60        |                    | 57.1       |             |                   | 15.00       | 2920.20        | 17157.60        | 3.8000             | 59.0       |
|             |                     | 21.00       | 151.60         | 14135.60        |                    | 57.1       |             |                   | 16.00       | 2923.70        | 17161.10        | 3.6250             | 59.1       |
|             |                     | 22.00       | 157.40         | 14141.40        |                    | 57.1       |             |                   | 17.00       | 2928.30        | 17165.70        | 3.4706             | 59.1       |
|             |                     | 23.00       | 172.40         | 14156.40        |                    | 57.1       |             |                   | 18.00       | 2930.60        | 17168.00        | 3.3333             | 59.1       |
|             |                     | 24.00       | 181.70         | 14165.70        |                    | 57.2       |             |                   | 19.00       | 2934.10        | 17171.50        | 3.2105             | 59.1       |
|             |                     | 25.00       | 185.10         | 14169.10        |                    | 57.2       |             |                   | 20.00       | 2937.60        | 17175.00        | 3.1000             | 59.1       |
|             |                     | 26.00       | 170.10         | 14154.10        |                    | 57.2       |             |                   | 21.00       | 2939.90        | 17177.30        | 3.0000             | 59.1       |
|             |                     | 27.00       | 160.80         | 14144.80        |                    | 57.2       |             |                   | 22.00       | 2943.40        | 17180.80        | 2.9091             | 59.1       |
|             |                     | 28.00       | 166.60         | 14150.60        |                    | 57.3       |             |                   | 23.00       | 2946.80        | 17184.20        | 2.8261             | 59.1       |
|             |                     | 29.00       | 178.20         | 14162.20        |                    | 57.3       |             |                   | 24.00       | 2948.00        | 17185.40        | 2.7500             | 59.1       |
|             |                     | 30.00       | 182.80         | 14166.80        |                    | 57.3       |             |                   | 25.00       | 2950.30        | 17187.70        | 2.6800             | 59.1       |
|             |                     | 31.00       | 177.00         | 14161.00        |                    | 57.3       |             |                   | 26.00       | 2953.80        | 17191.20        | 2.6154             | 59.1       |
|             |                     | 32.00       | 185.10         | 14169.10        |                    | 57.4       |             |                   | 27.00       | 2954.90        | 17192.30        | 2.5556             | 59.1       |
|             |                     | 33.00       | 186.30         | 14170.30        |                    | 57.4       | D           | End of 1st Shutin | 28.00       | 2957.20        | 17194.60        | 2.5000             | 59.1       |
|             |                     | 34.00       | 164.30         | 14148.30        |                    | 57.4       | E           | Start of 2nd Flow | 0.00        | 0.00           | 13686.50        |                    | 58.7       |
|             |                     | 35.00       | 189.80         | 14173.80        |                    | 57.4       |             |                   | 1.00        | 194.50         | 13881.00        |                    | 58.4       |



## Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

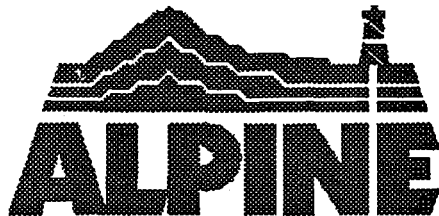
Job Ticket #: D2-9625 DST#: 4  
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO

Location: N-01-60-10-123-15

| Chart Label | Comments | Time (Min.) | Delta P (KPag) | Pressure (KPag) | Abscissa (T+dt)/dt | Temp. (°C) | Chart Label | Comments        | Time (Min.) | Delta P (KPag) | Pressure (KPag) | Abscissa (T+dt)/dt | Temp. (°C) |
|-------------|----------|-------------|----------------|-----------------|--------------------|------------|-------------|-----------------|-------------|----------------|-----------------|--------------------|------------|
|             |          | 2.00        | 69.40          | 13755.90        |                    | 58.2       |             |                 | 39.00       | 349.50         | 14036.00        |                    | 58.4       |
|             |          | 3.00        | 50.90          | 13737.40        |                    | 58.0       |             |                 | 40.00       | 329.90         | 14016.40        |                    | 58.5       |
|             |          | 4.00        | 122.70         | 13809.20        |                    | 57.9       |             |                 | 41.00       | 450.20         | 14136.70        |                    | 58.5       |
|             |          | 5.00        | 217.60         | 13904.10        |                    | 57.8       |             |                 | 42.00       | 463.00         | 14149.50        |                    | 58.4       |
|             |          | 6.00        | 311.40         | 13997.90        |                    | 57.7       |             |                 | 43.00       | 464.10         | 14150.60        |                    | 58.5       |
|             |          | 7.00        | 384.30         | 14070.80        |                    | 57.6       |             |                 | 44.00       | 451.40         | 14137.90        |                    | 58.5       |
|             |          | 8.00        | 464.10         | 14150.60        |                    | 57.6       |             |                 | 45.00       | 453.70         | 14140.20        |                    | 58.5       |
|             |          | 9.00        | 508.10         | 14194.60        |                    | 57.6       |             |                 | 46.00       | 419.00         | 14105.50        |                    | 58.5       |
|             |          | 10.00       | 564.80         | 14251.30        |                    | 57.7       |             |                 | 47.00       | 394.70         | 14081.20        |                    | 58.5       |
|             |          | 11.00       | 610.00         | 14296.50        |                    | 57.7       |             |                 | 48.00       | 382.00         | 14068.50        |                    | 58.6       |
|             |          | 12.00       | 665.50         | 14352.00        |                    | 57.8       |             |                 | 49.00       | 385.40         | 14071.90        |                    | 58.6       |
|             |          | 13.00       | 682.90         | 14369.40        |                    | 57.8       |             |                 | 50.00       | 387.70         | 14074.20        |                    | 58.6       |
|             |          | 14.00       | 709.50         | 14396.00        |                    | 57.9       |             |                 | 51.00       | 372.70         | 14059.20        |                    | 58.6       |
|             |          | 15.00       | 738.40         | 14424.90        |                    | 58.0       |             |                 | 52.00       | 387.70         | 14074.20        |                    | 58.6       |
|             |          | 16.00       | 709.50         | 14396.00        |                    | 58.1       |             |                 | 53.00       | 384.30         | 14070.80        |                    | 58.6       |
|             |          | 17.00       | 674.80         | 14361.30        |                    | 58.2       |             |                 | 54.00       | 403.90         | 14090.40        |                    | 58.6       |
|             |          | 18.00       | 626.20         | 14312.70        |                    | 58.2       | F           | End of 2nd Flow | 55.00       | 406.30         | 14092.80        |                    | 58.6       |
|             |          | 19.00       | 583.30         | 14269.80        |                    | 58.3       |             |                 | 1.00        | 2415.50        | 16508.30        | 98.0000            | 58.7       |
|             |          | 20.00       | 552.10         | 14238.60        |                    | 58.3       |             |                 | 2.00        | 2706.00        | 16798.80        | 49.5000            | 59.0       |
|             |          | 21.00       | 501.20         | 14187.70        |                    | 58.4       |             |                 | 3.00        | 2782.40        | 16875.20        | 33.3333            | 59.3       |
|             |          | 22.00       | 496.50         | 14183.00        |                    | 58.4       |             |                 | 4.00        | 2826.40        | 16919.20        | 25.2500            | 59.6       |
|             |          | 23.00       | 497.70         | 14184.20        |                    | 58.4       |             |                 | 5.00        | 2855.30        | 16948.10        | 20.4000            | 59.8       |
|             |          | 24.00       | 485.00         | 14171.50        |                    | 58.4       |             |                 | 6.00        | 2877.30        | 16970.10        | 17.1667            | 59.9       |
|             |          | 25.00       | 469.90         | 14156.40        |                    | 58.4       |             |                 | 7.00        | 2893.50        | 16986.30        | 14.8571            | 60.0       |
|             |          | 26.00       | 445.60         | 14132.10        |                    | 58.4       |             |                 | 8.00        | 2908.60        | 17001.40        | 13.1250            | 60.1       |
|             |          | 27.00       | 449.10         | 14135.60        |                    | 58.4       |             |                 | 9.00        | 2920.10        | 17012.90        | 11.7778            | 60.2       |
|             |          | 28.00       | 451.40         | 14137.90        |                    | 58.4       |             |                 | 10.00       | 2930.50        | 17023.30        | 10.7000            | 60.2       |
|             |          | 29.00       | 457.20         | 14143.70        |                    | 58.4       |             |                 | 11.00       | 2938.60        | 17031.40        | 9.8182             | 60.3       |
|             |          | 30.00       | 435.20         | 14121.70        |                    | 58.4       |             |                 | 12.00       | 2946.80        | 17039.60        | 9.0833             | 60.3       |
|             |          | 31.00       | 436.40         | 14122.90        |                    | 58.4       |             |                 | 13.00       | 2954.90        | 17047.70        | 8.4615             | 60.3       |
|             |          | 32.00       | 424.80         | 14111.30        |                    | 58.4       |             |                 | 14.00       | 2960.60        | 17053.40        | 7.9286             | 60.3       |
|             |          | 33.00       | 430.60         | 14117.10        |                    | 58.4       |             |                 | 15.00       | 2966.40        | 17059.20        | 7.4667             | 60.3       |
|             |          | 34.00       | 415.50         | 14102.00        |                    | 58.4       |             |                 | 16.00       | 2973.40        | 17066.20        | 7.0625             | 60.3       |
|             |          | 35.00       | 413.20         | 14099.70        |                    | 58.4       |             |                 | 17.00       | 2978.00        | 17070.80        | 6.7059             | 60.3       |
|             |          | 36.00       | 387.70         | 14074.20        |                    | 58.4       |             |                 | 18.00       | 2982.60        | 17075.40        | 6.3889             | 60.3       |
|             |          | 37.00       | 388.90         | 14075.40        |                    | 58.4       |             |                 | 19.00       | 2987.30        | 17080.10        | 6.1053             | 60.3       |
|             |          | 38.00       | 384.30         | 14070.80        |                    | 58.4       |             |                 | 20.00       | 2991.90        | 17084.70        | 5.8500             | 60.2       |



## Drill Stem Testing - Time / Pressure Listing

Company: PARAMOUNT RESOURCES LTD.  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

Job Ticket #: D2-9625 DST#: 4  
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD  
Location: N-01-60-10-123-15

Contact: WILBERT CALLIHO

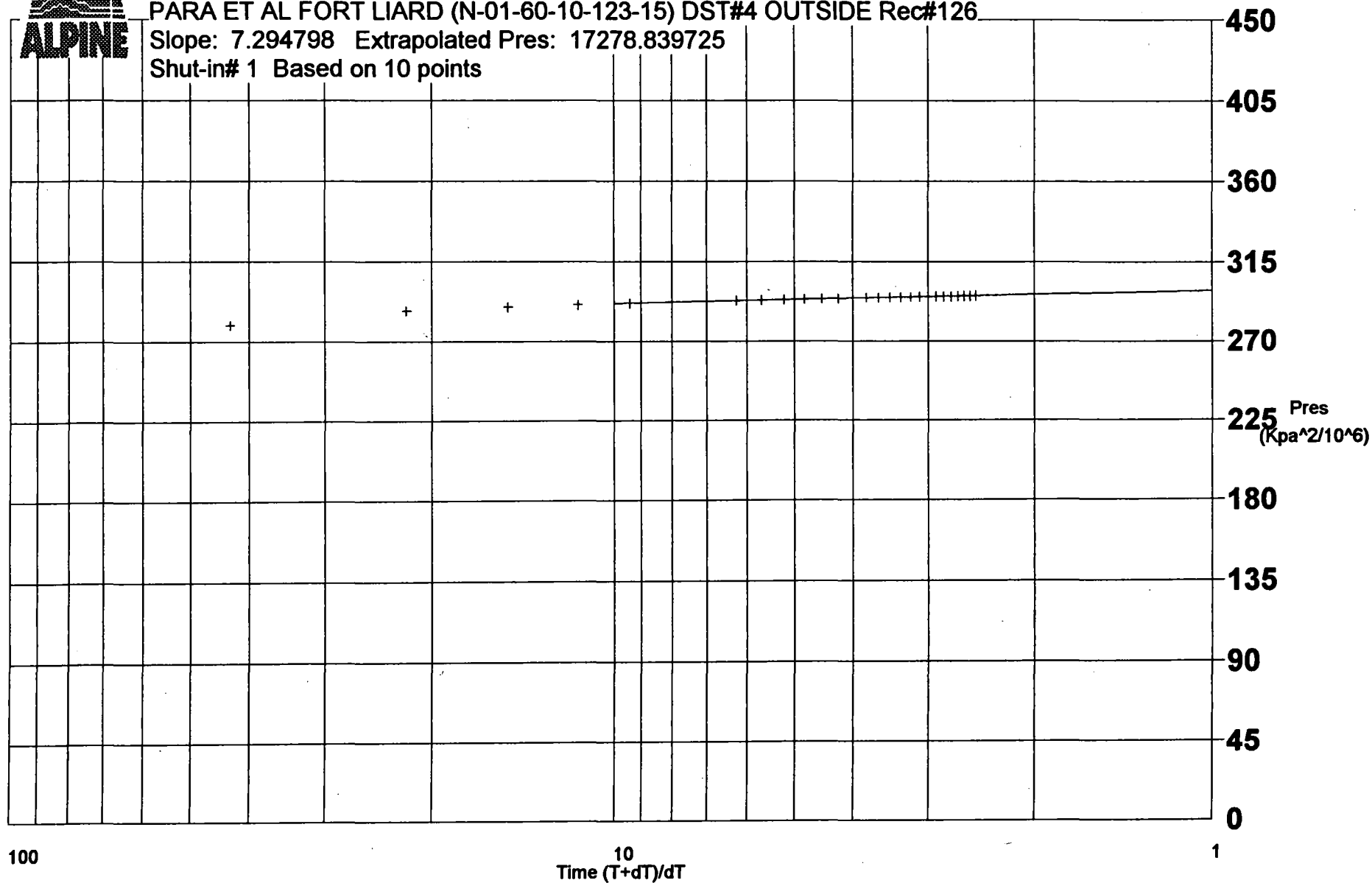
| Chart Label | Comments          | Time (Min.) | Delta P (KPag) | Pressure (KPag) | Abscissa (T+dt)/dt | Temp. (°C) |
|-------------|-------------------|-------------|----------------|-----------------|--------------------|------------|
|             |                   | 21.00       | 2996.50        | 17089.30        | 5.6190             | 60.2       |
|             |                   | 22.00       | 3000.00        | 17092.80        | 5.4091             | 60.2       |
|             |                   | 23.00       | 3003.50        | 17096.30        | 5.2174             | 60.2       |
|             |                   | 24.00       | 3006.90        | 17099.70        | 5.0417             | 60.2       |
|             |                   | 25.00       | 3010.40        | 17103.20        | 4.8800             | 60.2       |
|             |                   | 26.00       | 3013.90        | 17106.70        | 4.7308             | 60.2       |
|             |                   | 27.00       | 3016.20        | 17109.00        | 4.5926             | 60.2       |
|             |                   | 28.00       | 3019.70        | 17112.50        | 4.4643             | 60.1       |
|             |                   | 29.00       | 3022.00        | 17114.80        | 4.3448             | 60.1       |
|             |                   | 30.00       | 3025.50        | 17118.30        | 4.2333             | 60.1       |
|             |                   | 31.00       | 3027.80        | 17120.60        | 4.1290             | 60.1       |
|             |                   | 32.00       | 3031.20        | 17124.00        | 4.0313             | 60.1       |
|             |                   | 33.00       | 3033.60        | 17126.40        | 3.9394             | 60.1       |
|             |                   | 34.00       | 3035.90        | 17128.70        | 3.8529             | 60.1       |
|             |                   | 35.00       | 3038.20        | 17131.00        | 3.7714             | 60.1       |
|             |                   | 36.00       | 3041.70        | 17134.50        | 3.6944             | 60.0       |
|             |                   | 37.00       | 3044.00        | 17136.80        | 3.6216             | 60.1       |
|             |                   | 38.00       | 3045.10        | 17137.90        | 3.5526             | 60.0       |
|             |                   | 39.00       | 3047.40        | 17140.20        | 3.4872             | 60.0       |
|             |                   | 40.00       | 3049.80        | 17142.60        | 3.4250             | 60.0       |
|             |                   | 41.00       | 3052.10        | 17144.90        | 3.3659             | 60.0       |
|             |                   | 42.00       | 3054.40        | 17147.20        | 3.3095             | 60.0       |
|             |                   | 43.00       | 3055.50        | 17148.30        | 3.2558             | 60.0       |
|             |                   | 44.00       | 3057.90        | 17150.70        | 3.2045             | 60.0       |
|             |                   | 45.00       | 3059.00        | 17151.80        | 3.1556             | 60.0       |
|             |                   | 46.00       | 3061.30        | 17154.10        | 3.1087             | 60.0       |
|             |                   | 47.00       | 3063.70        | 17156.50        | 3.0638             | 60.0       |
| G           | End of 2nd Shutin | 48.00       | 3064.80        | 17157.60        | 3.0208             | 60.0       |
| Q           | Final Hydrostatic | 0.00        | 0.00           | 19687.70        |                    | 58.2       |



Horner Plot  
PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 OUTSIDE Rec#126

Slope: 7.294798 Extrapolated Pres: 17278.839725

Shut-in# 1 Based on 10 points



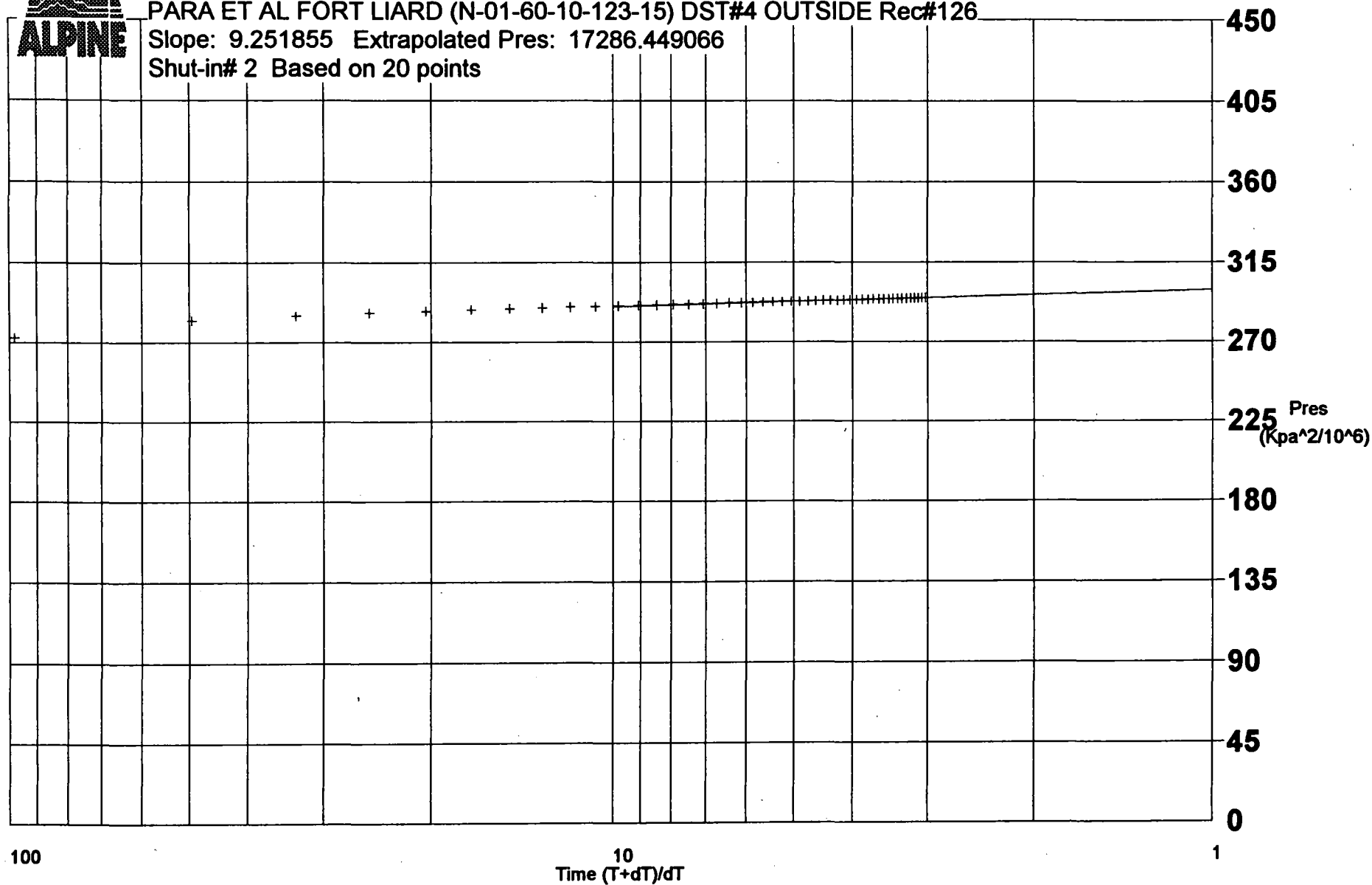


Homer Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 OUTSIDE Rec#126

Slope: 9.251855 Extrapolated Pres: 17286.449066

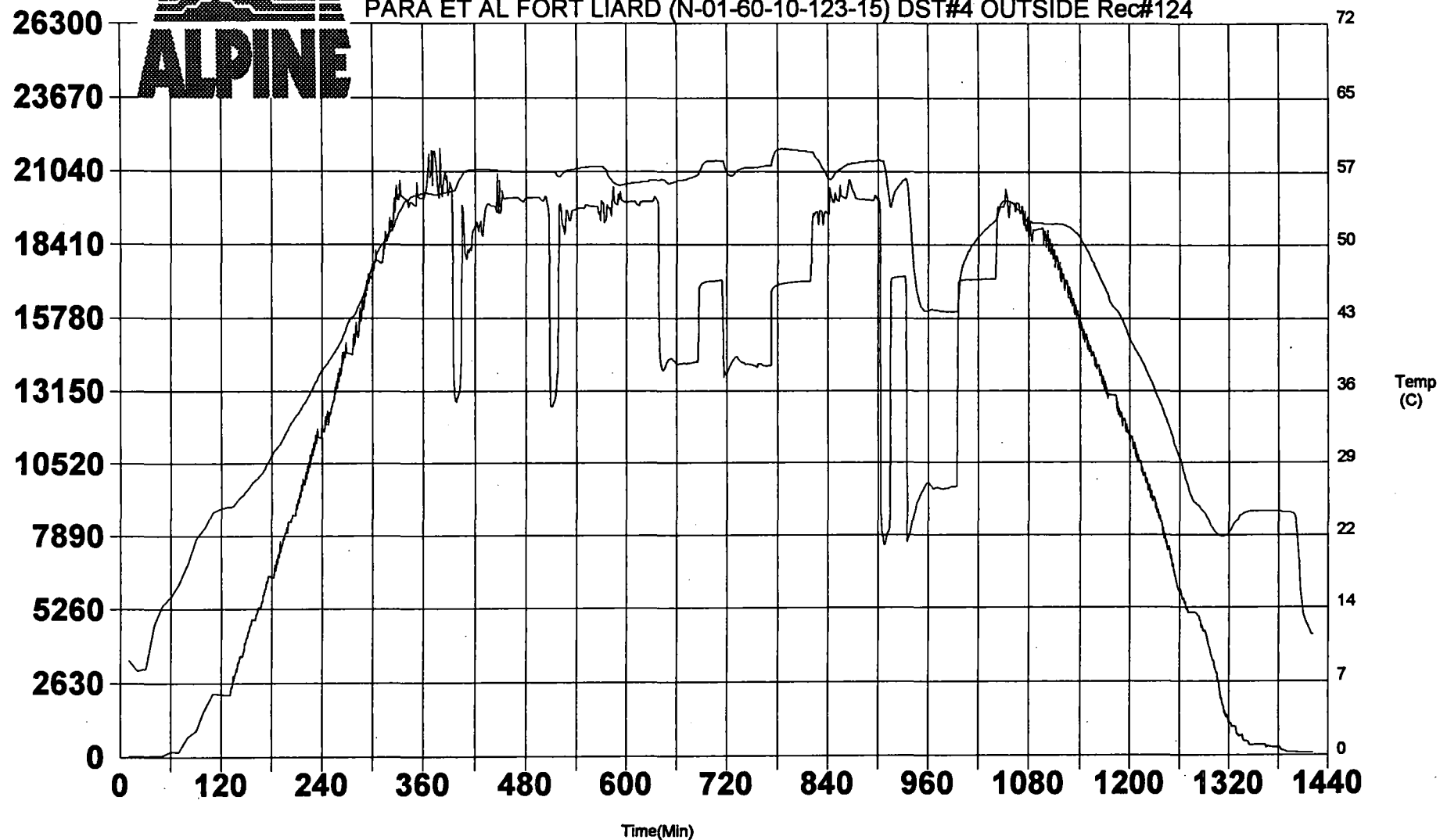
Shut-in# 2 Based on 20 points





# Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 OUTSIDE Rec#124



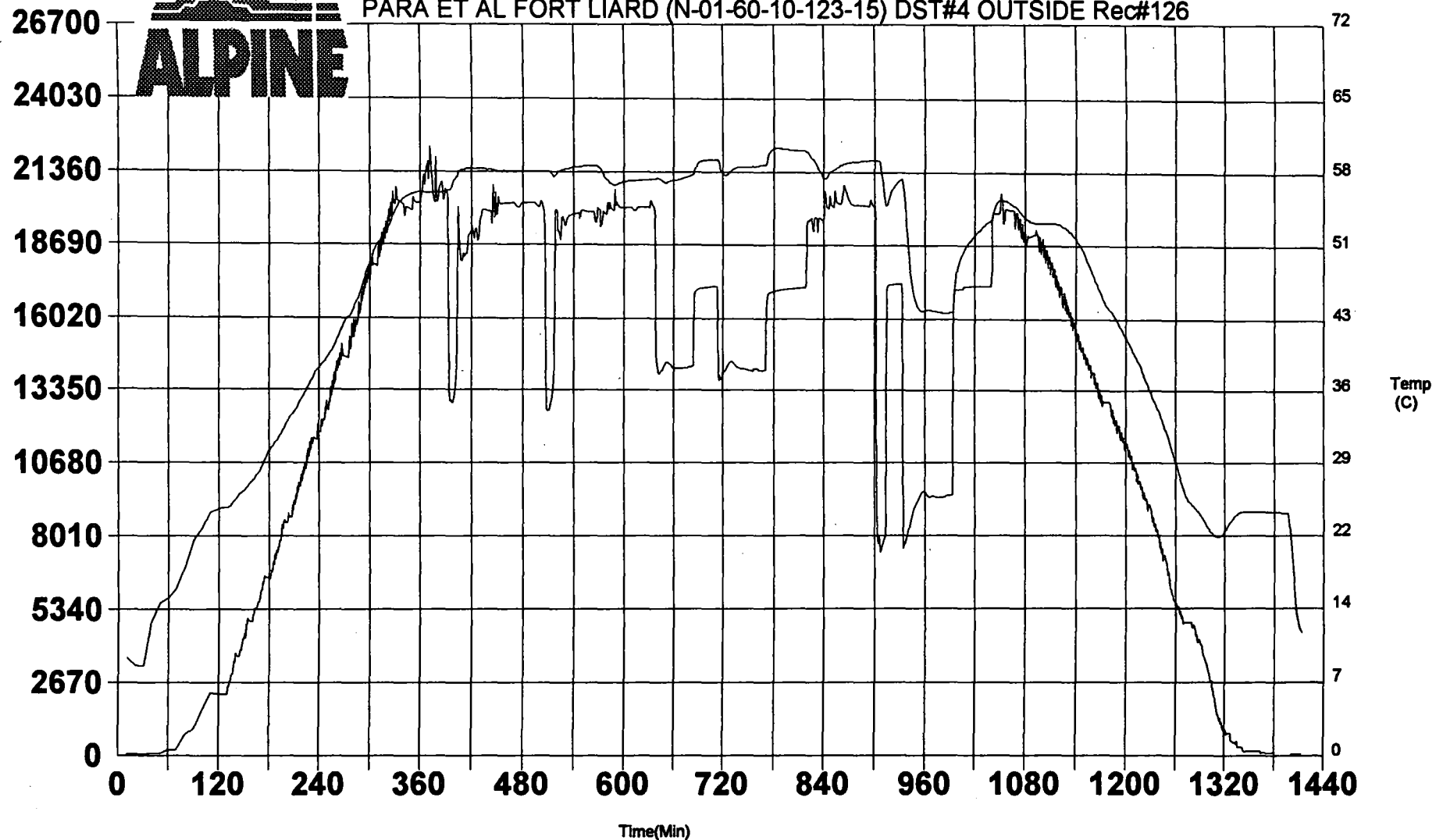
A Initial Hydrostatic - 19975  
B Start of 1st Flow - 13917  
C End of 1st Flow - 14178  
D End of 1st Shutin - 17138  
E Start of 2nd Flow - 13638

F End of 2nd Flow - 14053  
G End of 2nd Shutin - 17106  
Q Final Hydrostatic - 19584



# Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 OUTSIDE Rec#126



A Initial Hydrostatic - 20063  
B Start of 1st Flow - 13984  
C End of 1st Flow - 14237  
D End of 1st Shutin - 17195  
E Start of 2nd Flow - 13687

F End of 2nd Flow - 14093  
G End of 2nd Shutin - 17158  
Q Final Hydrostatic - 19688



## ***Real Time Test Report***

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Prepared for: **PARAMOUNT RESOURCES**  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

**Well Name: PARA ET AL FORT LIARD**  
**Location: N-01-60-10-123-15**

**Test Date: 01/09/2001**

**Job Ticket #: T5160-4      DST#: 4**



## Real Time Testing Report

Company: PARAMOUNT RESOURCES LTD.  
4700, 888 - 3rd Street S.W.  
CALGARY, AB

Job Ticket #: T5160-4 DST#: 4  
Test Date: 01/09/2001 1200hrs

Well Name: PARA ET AL FORT LIARD

Contact: WILBERT CALLIHOO

Location: N-01-60-10-123-15

### General Information:

Test Type: INFLATE RESET  
Interval: 1717m -1738m  
Formation: MATTSON  
KB Elevation: 492.10m  
Ground Elevation: 487.00m  
Total Depth: 1940.00m  
Test Mode: Gas

Tester: B. HOLLINGSHEAD  
Truck No.: Unit 114  
Contractor: PRECISION  
Rig No.: 387  
Hole Diameter: 222mm  
Hole Condition: GOOD  
Bottom Hole Temperature: 60.10 C

### Telemetry Recorder Information:

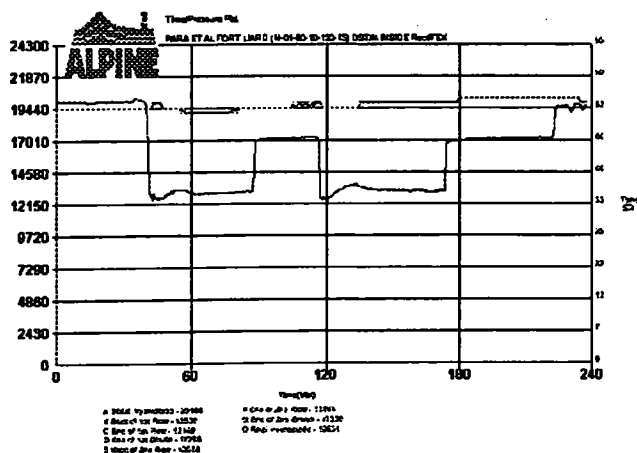
INSIDE

Recorder #: FEK Depth: 1706.45 m

| Flag Points:          | Time: | Pressure: |
|-----------------------|-------|-----------|
| A Initial Hydrostatic | 0.00  | 20144.1   |
| B Start of 1st Flow   | 0.00  | 12630.2   |
| C End of 1st Flow     | 44.88 | 13148.5   |
| D End of 1st Shutin   | 27.18 | 17278.0   |
| E Start of 2nd Flow   | 0.00  | 12512.3   |
| F End of 2nd Flow     | 55.44 | 13153.9   |
| G End of 2nd Shutin   | 47.40 | 17230.3   |
| Q Final Hydrostatic   | 0.00  | 19630.8   |

### Test Run Information:

Start Time: 1200hrs  
Reached Test Depth: 2140hrs  
Pull Out Time: 30hrs  
Tool Out Of Hole: 1000hrs  
Water Loss: 6.20cm<sup>3</sup>  
Mud Drop: NO  
VIS: 76.00S/L  
Filter Cake: 1.60mm  
Pump Time: 30min  
Reversed Out: NO  
Mud Type: GEL CHEMICAL  
Mud Weight: 1160.00kg/m<sup>3</sup>  
Amount of fill: 0.00m  
Amount of cushion: 0.00  
Type of cushion:



### General Remarks:

This is the second of three tests run on the same trip in the hole. Mechanically successful. \*Test results suggest excellent permeability within the zone tested.

PREFLOW: Gas to surface immediately.

FINAL FLOW: Gas to surface immediately, misting mud throughout.

\*\*\*See gas volume charts for gas rates.

### Recovery Description:

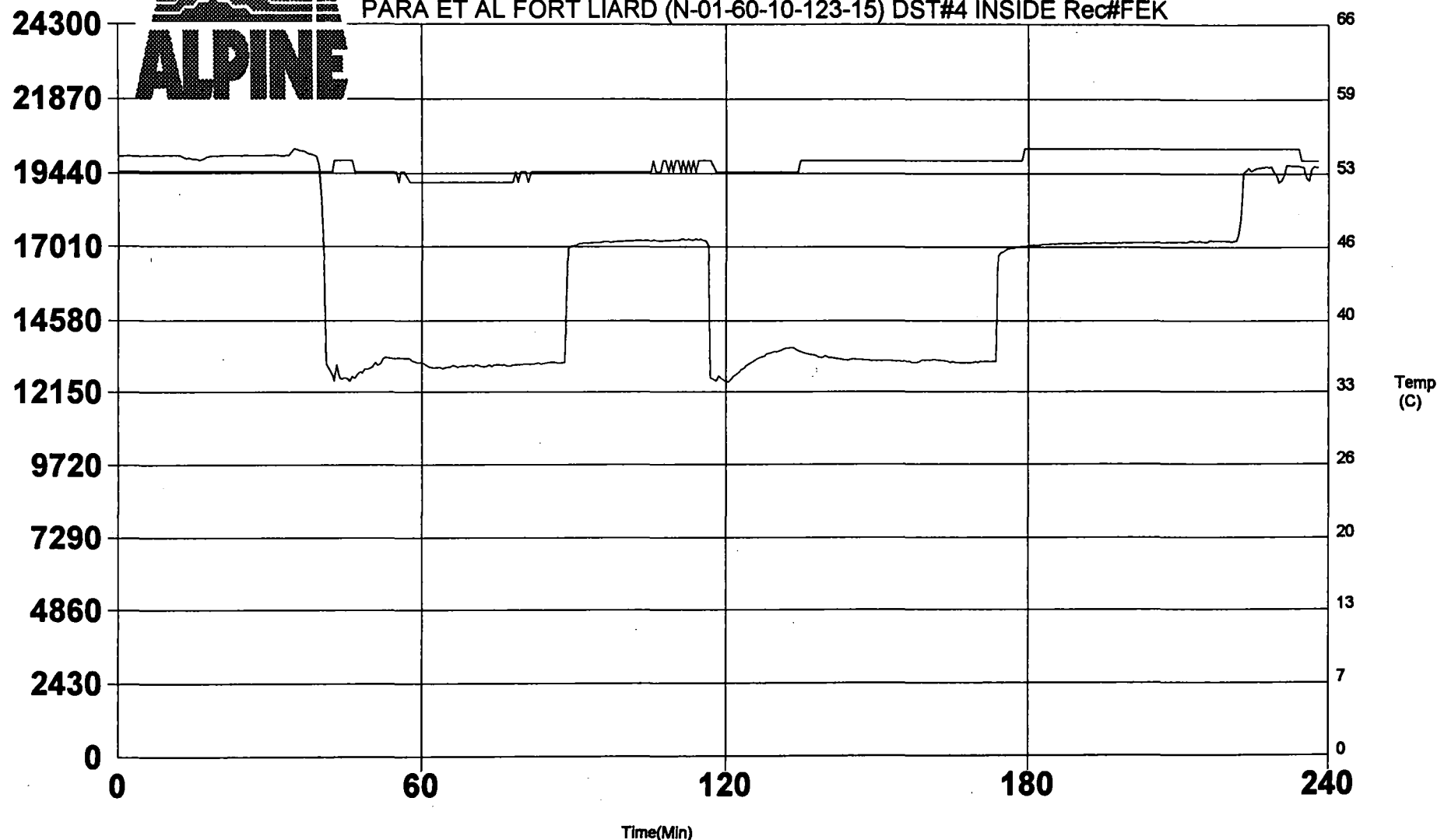
Total fluid recovery for DST #3 through #5 was 55 meters, consisting of 25 meters condensate and 30 meters fresh water.

Gas to surface.



# Time/Pressure Plot

PARA ET AL FORT LIARD (N-01-60-10-123-15) DST#4 INSIDE Rec#FEK



A Initial Hydrostatic - 20144  
B Start of 1st Flow - 12530  
C End of 1st Flow - 13149  
D End of 1st Shutin - 17278  
E Start of 2nd Flow - 12512

F End of 2nd Flow - 13154  
G End of 2nd Shutin - 17230  
Q Final Hydrostatic - 19631