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# ***Sub-Surface Pressure Report***

## **Chevron Canada Resources**

Flow & Build-Up  
Chevron et al Liard  
M-25

Jan 07, 00 to Jan 25, 00



**7449 - 49 Avenue Crescent  
Red Deer, Alberta T4P 1X6**

ALBERTA ENERGY BOARD  
ENGINEERING BRANCH  
MAR 20 2000

## Chevron Canada Resources

Flow & Build-Up  
Chevron et al Liard  
M-25

Jan 07, 00 to Jan 25, 00

| Service Company Contact Info |                               |                                                       |
|------------------------------|-------------------------------|-------------------------------------------------------|
| Report Writer                | Wade Nicks, 309-7940          | Service Company Lee Tool, Div. of Schlumberger        |
| Operator                     | Jason Plested, (780) 778-2361 | Job ID M-25ext1<br>Test Date Jan 07, 00 to Jan 25, 00 |

Gauge: Lee Memory Recorder Model 3000s (Quartz)  
Manufacturer: Lee Tool, Division of Schlumberger Canada Limited



# Flow & Build-Up

Chevron Canada Resources  
Alberta, Canada

Jan 07, 00 to Jan 25, 00

Chevron et al Liard

M-25

Liard, Nahanni

| Well      |                          |               |          |
|-----------|--------------------------|---------------|----------|
| Client    | Chevron Canada Resources | Province      | Alberta  |
|           |                          | Country       | Canada   |
| Well Name | Chevron et al Liard      | Deviated Well | No       |
|           |                          | Well Status   | Gas      |
| Well No.  | M-25                     | KB Elevation  | 917.80 m |
|           |                          | CF Elevation  | 910.51 m |
| Field     | Liard                    | Pool          | Nahanni  |
|           |                          | Pool Datum    |          |

| Test                                     |                   |             |                       |                                |                         |                 |
|------------------------------------------|-------------------|-------------|-----------------------|--------------------------------|-------------------------|-----------------|
| Test Name                                |                   |             |                       | Atmospheric                    |                         |                 |
| Flow & Build-Up                          |                   |             |                       | 101.30 KPa A                   |                         |                 |
| Test Start (mm/dd/yy)                    |                   | Test Finish |                       | Casing ID                      |                         | Tubing ID       |
| 01/07/00                                 |                   | 11:33 AM    |                       | 01/25/00                       |                         | 10:30 AM        |
| On Bottom                                |                   | Off Bottom  |                       | C. Pres. Before                |                         | T. Pres. Before |
| 01/07/00                                 |                   | 01:10 PM    |                       | 01/25/00                       |                         | 09:38 AM        |
| Shut In                                  |                   | ET0         |                       | C. Pres. After                 |                         | T. Pres. After  |
| 01/11/00                                 |                   | 05:55 PM    |                       | 01/07/00                       |                         | 11:33 AM        |
| <div></div>                              | Meas. Depth [mCF] | TVD [mCF]   | Est. Pressure [KPa G] | Est. Gradient [KPa/m]          | Est. Temperature [DegC] | Grad. Threshold |
|                                          | Well Datum        |             |                       |                                |                         | Grad. Recorder  |
|                                          | Landed Depth      | 3443.04     | 3443.04               |                                |                         |                 |
|                                          | Avg. MPP Depth    | 3601.40     | 3601.40               |                                |                         |                 |
| Operator                                 |                   |             |                       | Service Company                |                         |                 |
| Jason Plested, (780) 778-2361            |                   |             |                       | Lee Tool, Div. of Schlumberger |                         |                 |
| Remarks                                  |                   |             |                       |                                |                         |                 |
| Lee Memory Recorders (Top 2 Tandem Sets) |                   |             |                       |                                |                         |                 |

| Depth References   |            |                  |
|--------------------|------------|------------------|
| Depth Reference    | Offset [m] | Elevation [mMSL] |
| Casing Flange (CF) |            | 910.51           |
| Kelly Bushing (KB) | CF + 7.29  | 917.80           |

| Perforations       |                       |                |          |          |
|--------------------|-----------------------|----------------|----------|----------|
| Perf Top MD, [mCF] | Perf Bottom MD, [mCF] | MPP TVD, [mCF] | Pressure | Gradient |
| 3440.08            | 3762.71               | 3601.40        |          |          |

| Top Recorder      |                 |                    |             |
|-------------------|-----------------|--------------------|-------------|
| Model             | LMR-4000S       | Serial             | 9439Q-16E   |
|                   |                 | Latest Calibration | 10/08/99    |
| Max. Rated Press. | 110211.98 KPa G | Max. Rated Temp.   | 174.96 DegC |

| Recorder 2        |           |                    |           |
|-------------------|-----------|--------------------|-----------|
| Model             | LMR-4000S | Serial             | 9443Q-16E |
|                   |           | Latest Calibration | 11/15/99  |
| Max. Rated Press. |           | Max. Rated Temp.   |           |

**Recorder 3**

|                   |           |                  |           |                    |          |  |
|-------------------|-----------|------------------|-----------|--------------------|----------|--|
| Model             | LMR-4000S | Serial           | 9506Q-16E | Latest Calibration | 12/07/99 |  |
| Max. Rated Press. |           | Max. Rated Temp. |           |                    |          |  |

**Bottom Recorder**

|                   |           |                  |           |                    |          |  |
|-------------------|-----------|------------------|-----------|--------------------|----------|--|
| Model             | LMR-4000S | Serial           | 9508Q-16E | Latest Calibration | 12/07/99 |  |
| Max. Rated Press. |           | Max. Rated Temp. |           |                    |          |  |



# Tool Summary

Chevron Canada Resources  
Alberta, Canada

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Liard, Nahanni

| Top Recorder |             |              |           |                    |          |                |       |
|--------------|-------------|--------------|-----------|--------------------|----------|----------------|-------|
| Tool         | LMR-4000S   | Serial       | 9439Q-16E | Latest Calibration | 10/08/99 | Battery Serial | 165 C |
| Landed Depth | 3440.04 mCF | Depth Offset | -3.00 m   | Min. Battery       | 7.28 V   |                |       |

| Program: ChevronExt30day01032000 |                          |                    |                |                        |                    |                    |                 |                    |                  |                    |                 |                          |
|----------------------------------|--------------------------|--------------------|----------------|------------------------|--------------------|--------------------|-----------------|--------------------|------------------|--------------------|-----------------|--------------------------|
| Intervals                        |                          |                    |                |                        | Expected Samples   |                    |                 | Actual Samples     |                  |                    |                 |                          |
| Mode                             | Interval<br>[d hh:mm:ss] | Rate<br>[hh:mm:ss] | Delta<br>[KPa] | Periodic<br>[hh:mm:ss] | Regular<br>Samples | Percent<br>Storage | Energy<br>[Ahr] | Regular<br>Samples | Delta<br>Samples | Percent<br>Storage | Energy<br>[Ahr] | Duration<br>[d hh:mm:ss] |
| HB                               | 10:00                    | 1                  |                |                        | 600                | 0.2%               | 0.0031          | 600                |                  | 0.2%               | 0.0031          | 10:00                    |
| HB                               | 10                       | 5                  |                |                        | 172800             | 49.4%              | 2.2327          | 70390              |                  | 20.1%              | 0.9095          | 4 1:45:50                |
| HB                               | 20                       | 10                 |                |                        | 172800             | 49.4%              | 3.9127          |                    |                  |                    |                 |                          |
| HB                               | 30                       | 15:00              |                |                        | 2880               | 0.8%               | 5.0492          |                    |                  |                    |                 |                          |
| Totals:                          | 60 10:00                 |                    |                |                        | 349080             | 99.9%              | 11.1976         | 70990              |                  | 20.3%              | 0.9126          | 4 1:55:50                |

| Recorder 2   |  |              |  |                    |  |                |  |
|--------------|--|--------------|--|--------------------|--|----------------|--|
| Tool         |  | Serial       |  | Latest Calibration |  | Battery Serial |  |
| LMR-4000S    |  | 9443Q-16E    |  | 11/15/99           |  | 165 C          |  |
| Landed Depth |  | Depth Offset |  | Min. Battery       |  |                |  |
| 3441.04 mCF  |  | -2.00 m      |  | 7.28 V             |  |                |  |

| Program   |                          |                    |             |                        |                    |                    |                 |                    |                  |                    |                 |                          |
|-----------|--------------------------|--------------------|-------------|------------------------|--------------------|--------------------|-----------------|--------------------|------------------|--------------------|-----------------|--------------------------|
| Intervals |                          |                    |             |                        | Expected Samples   |                    |                 | Actual Samples     |                  |                    |                 |                          |
| Mode      | Interval<br>[d hh:mm:ss] | Rate<br>[hh:mm:ss] | Delta<br>[] | Periodic<br>[hh:mm:ss] | Regular<br>Samples | Percent<br>Storage | Energy<br>[Ahr] | Regular<br>Samples | Delta<br>Samples | Percent<br>Storage | Energy<br>[Ahr] | Duration<br>[d hh:mm:ss] |
|           |                          |                    |             |                        |                    |                    |                 |                    |                  |                    |                 |                          |

| Recorder 3   |  |              |  |                    |  |                |  |
|--------------|--|--------------|--|--------------------|--|----------------|--|
| Tool         |  | Serial       |  | Latest Calibration |  | Battery Serial |  |
| LMR-4000S    |  | 9506Q-16E    |  | 12/07/99           |  | 165 C          |  |
| Landed Depth |  | Depth Offset |  | Min. Battery       |  |                |  |
| 3442.04 mCF  |  | -1.00 m      |  | 7.28 V             |  |                |  |

| Program   |                          |                    |             |                        |                    |                    |                 |                    |                  |                    |                 |                          |
|-----------|--------------------------|--------------------|-------------|------------------------|--------------------|--------------------|-----------------|--------------------|------------------|--------------------|-----------------|--------------------------|
| Intervals |                          |                    |             |                        | Expected Samples   |                    |                 | Actual Samples     |                  |                    |                 |                          |
| Mode      | Interval<br>[d hh:mm:ss] | Rate<br>[hh:mm:ss] | Delta<br>[] | Periodic<br>[hh:mm:ss] | Regular<br>Samples | Percent<br>Storage | Energy<br>[Ahr] | Regular<br>Samples | Delta<br>Samples | Percent<br>Storage | Energy<br>[Ahr] | Duration<br>[d hh:mm:ss] |
|           |                          |                    |             |                        |                    |                    |                 |                    |                  |                    |                 |                          |

| <b>Bottom Recorder</b> |             |                    |           |
|------------------------|-------------|--------------------|-----------|
| Tool                   | LMR-4000S   | Serial             | 9508Q-16E |
|                        |             | Latest Calibration | 12/07/99  |
|                        |             | Battery Serial     | 165 C     |
| Landed Depth           | 3443.04 mCF | Depth Offset       | 0.00 m    |
|                        |             | Min. Battery       | 7.25 V    |

| <b>Program</b>   |                          |                    |             |                        |                         |                    |                 |                       |                  |                    |                 |                          |
|------------------|--------------------------|--------------------|-------------|------------------------|-------------------------|--------------------|-----------------|-----------------------|------------------|--------------------|-----------------|--------------------------|
| <i>Intervals</i> |                          |                    |             |                        | <i>Expected Samples</i> |                    |                 | <i>Actual Samples</i> |                  |                    |                 |                          |
| Mode             | Interval<br>[d hh:mm:ss] | Rate<br>[hh:mm:ss] | Delta<br>[] | Periodic<br>[hh:mm:ss] | Regular<br>Samples      | Percent<br>Storage | Energy<br>[Ahr] | Regular<br>Samples    | Delta<br>Samples | Percent<br>Storage | Energy<br>[Ahr] | Duration<br>[d hh:mm:ss] |
|                  |                          |                    |             |                        |                         |                    |                 |                       |                  |                    |                 |                          |



# Calibration Summary

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## Top Recorder

|              |             |              |           |                    |          |                |       |
|--------------|-------------|--------------|-----------|--------------------|----------|----------------|-------|
| Tool         | LMR-4000S   | Serial       | 9439Q-16E | Latest Calibration | 10/08/99 | Battery Serial | 165 C |
| Landed Depth | 3440.04 mCF | Depth Offset | -3.00 m   | Min. Battery       | 7.28 V   |                |       |

## Equations

FP = Pres Freq (Hz)

FT = Temp Freq (Hz)

$XP = 2.303900e+004 + (1.000000e-002) FP$

$XT = 5.246500e+004 + (1.000000e-002) FT$

$P_0 = 1.999884e+001 + (-1.555733e+000) XT + (-2.169167e-002) XT^2 + (-1.713039e-006) XT^3 + (-1.803234e-008) XT^4$

$P_1 = 4.309890e+001 + (-2.071472e-002) XT + (3.720297e-005) XT^2 + (4.282086e-008) XT^3 + (2.012920e-010) XT^4$

$P_2 = -1.730014e-003 + (8.686558e-006) XT + (-9.234627e-008) XT^2 + (-4.203621e-010) XT^3 + (-9.959051e-013) XT^4$

$P_3 = 5.690451e-007 + (4.122524e-010) XT + (1.397269e-010) XT^2 + (8.181565e-013) XT^3 + (1.704638e-015) XT^4$

Pressure (psiA) =  $P_0 + P_1 XP + P_2 XP^2 + P_3 XP^3$

$T_0 = 2.507573e+001$

$T_1 = -7.264061e-001$

$T_2 = -8.534479e-004$

$T_3 = -6.853408e-007$

Temperature (degC) =  $T_0 + T_1 XT + T_2 XT^2 + T_3 XT^3$

## Recorder 2

|              |             |              |           |                    |          |                |       |
|--------------|-------------|--------------|-----------|--------------------|----------|----------------|-------|
| Tool         | LMR-4000S   | Serial       | 9443Q-16E | Latest Calibration | 11/15/99 | Battery Serial | 165 C |
| Landed Depth | 3441.04 mCF | Depth Offset | -2.00 m   | Min. Battery       | 7.25 V   |                |       |

## Equations

FP = Pres Freq (Hz)

FT = Temp Freq (Hz)

$XP = 0.000000e+000 + (0.000000e+000) FP$

$XT = 0.000000e+000 + (0.000000e+000) FT$

## Recorder 3

|              |             |              |           |                    |          |                |       |
|--------------|-------------|--------------|-----------|--------------------|----------|----------------|-------|
| Tool         | LMR-4000S   | Serial       | 9506Q-16E | Latest Calibration | 12/07/99 | Battery Serial | 165 C |
| Landed Depth | 3442.04 mCF | Depth Offset | -1.00 m   | Min. Battery       | 7.25 V   |                |       |

## Equations

FP = Pres Freq (Hz)

FT = Temp Freq (Hz)

$XP = 0.000000e+000 + (0.000000e+000) FP$

$XT = 0.000000e+000 + (0.000000e+000) FT$

| <b>Bottom Recorder</b> |              |                    |                |
|------------------------|--------------|--------------------|----------------|
| Tool                   | Serial       | Latest Calibration | Battery Serial |
| LMR-4000S              | 9508Q-16E    | 12/07/99           | 165 C          |
| Landed Depth           | Depth Offset | Min. Battery       |                |
| 3443.04 mCF            | 0.00 m       | 7.25 V             |                |

| <b>Equations</b>                        |  |  |  |
|-----------------------------------------|--|--|--|
| FP = Pres Freq (Hz)                     |  |  |  |
| FT = Temp Freq (Hz)                     |  |  |  |
| XP = 0.000000e+000 + (0.000000e+000) FP |  |  |  |
| XT = 0.000000e+000 + (0.000000e+000) FT |  |  |  |



# Recorded Data

Chevron Canada Resources  
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| Data                           |                                |                     |                     |                     |                     |                       |                       |                       |                       |                                 |
|--------------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------------|
| 9443Q-16E                      |                                | 9508Q-16E           | 9506Q-16E           | 9443Q-16E           | 9439Q-16E           | 9508Q-16E             | 9506Q-16E             | 9443Q-16E             | 9439Q-16E             |                                 |
| Real Time<br>(mmm dd,yy 24 hr) | Elapsed Time<br>(DDD:HH:MM:SS) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Comments                        |
| Jan 07, 00                     | 11:33:00                       | 0:00:00:00          | -12.695             | -8.886              | 2.413               | 3.233                 | 12.42                 | 17.75                 | 8.29                  | 15.46                           |
|                                | 11:34:00                       | 0:00:01:00          | -17.410             | -9.305              | 2.917               | 3.918                 | 12.34                 | 17.83                 | 8.37                  | 15.52 9508Q-16E Bottom Recorder |
|                                | 11:35:00                       | 0:00:02:00          | -17.788             | -8.884              | 8.128               | 3.307                 | 12.37                 | 17.86                 | 8.31                  | 15.60 9506Q-16E Middle Recorder |
|                                | 11:36:00                       | 0:00:03:00          | -13.909             | -5.880              | 13.243              | -3.664                | 12.15                 | 17.68                 | 8.01                  | 9.62 9443Q-16E Middle Recorder  |
|                                | 11:37:00                       | 0:00:04:00          | -11.191             | -2.657              | 17.653              | -2.412                | 11.68                 | 17.21                 | 7.51                  | 9.75 9439Q-16E Top Recorder     |
|                                | 12:37:00                       | 0:01:04:00          | 27538.629           | 27550.150           | 27456.737           | 27401.854             | 130.68                | 129.80                | 127.72                | 119.26                          |
|                                | 13:10:00                       | 0:01:37:00          | 27834.180           | 27836.463           | 27804.912           | 27793.921             | 143.94                | 143.64                | 142.88                | 139.98 On Bottom                |
|                                | 14:10:00                       | 0:02:37:00          | 27889.364           | 27883.843           | 27889.023           | 27884.525             | 147.47                | 147.51                | 147.52                | 147.39                          |
|                                | 15:10:00                       | 0:03:37:00          | 27592.974           | 27588.973           | 27585.579           | 27573.710             | 148.94                | 148.78                | 148.37                | 147.74                          |
|                                | 16:10:00                       | 0:04:37:00          | 27735.305           | 27719.500           | 27667.773           | 27628.974             | 151.12                | 151.09                | 150.98                | 150.82                          |
|                                | 17:10:00                       | 0:05:37:00          | 27806.476           | 27796.532           | 27808.171           | 27795.902             | 150.89                | 150.86                | 150.77                | 150.65                          |
|                                | 18:10:00                       | 0:06:37:00          | 27895.111           | 27888.258           | 27895.001           | 27890.483             | 149.67                | 149.65                | 149.61                | 149.56                          |
|                                | 19:10:00                       | 0:07:37:00          | 27893.296           | 27887.928           | 27892.559           | 27889.366             | 149.02                | 149.03                | 148.97                | 148.83                          |
|                                | 20:10:00                       | 0:08:37:00          | 27893.375           | 27888.122           | 27894.239           | 27889.493             | 148.89                | 148.91                | 148.87                | 148.70                          |
| Jan 08, 00                     | 21:10:00                       | 0:09:37:00          | 27893.737           | 27888.393           | 27893.714           | 27889.897             | 148.80                | 148.87                | 148.87                | 148.71                          |
|                                | 22:10:00                       | 0:10:37:00          | 27893.621           | 27888.181           | 27894.572           | 27890.117             | 148.70                | 148.84                | 148.85                | 148.70                          |
|                                | 23:10:00                       | 0:11:37:00          | 27893.345           | 27888.051           | 27894.577           | 27889.794             | 148.63                | 148.83                | 148.84                | 148.69                          |
|                                | 00:10:00                       | 0:12:37:00          | 27390.153           | 27389.657           | 27402.995           | 27425.892             | 149.84                | 149.67                | 149.28                | 148.66                          |
|                                | 01:10:00                       | 0:13:37:00          | 27382.109           | 27376.331           | 27381.767           | 27377.600             | 152.07                | 152.04                | 151.97                | 151.80                          |
|                                | 02:10:00                       | 0:14:37:00          | 27367.586           | 27361.721           | 27369.117           | 27363.663             | 152.40                | 152.37                | 152.31                | 152.17                          |
|                                | 03:10:00                       | 0:15:37:00          | 27361.546           | 27355.345           | 27365.544           | 27359.240             | 152.59                | 152.57                | 152.50                | 152.37                          |
|                                | 04:10:00                       | 0:16:37:00          | 27360.531           | 27354.260           | 27360.706           | 27355.535             | 152.74                | 152.72                | 152.66                | 152.53                          |
|                                | 05:10:00                       | 0:17:37:00          | 27360.491           | 27354.158           | 27359.933           | 27356.164             | 152.84                | 152.83                | 152.78                | 152.64                          |
|                                | 06:10:00                       | 0:18:37:00          | 27362.079           | 27355.713           | 27363.593           | 27357.732             | 152.91                | 152.89                | 152.84                | 152.71                          |
|                                | 07:10:00                       | 0:19:37:00          | 27364.881           | 27358.466           | 27364.403           | 27359.273             | 152.96                | 152.95                | 152.90                | 152.76                          |
|                                | 08:10:00                       | 0:20:37:00          | 27366.167           | 27359.684           | 27367.581           | 27361.292             | 153.01                | 153.00                | 152.94                | 152.82                          |
|                                | 09:10:00                       | 0:21:37:00          | 27343.758           | 27337.337           | 27348.075           | 27344.230             | 152.96                | 152.95                | 152.89                | 152.77                          |
|                                | 10:10:00                       | 0:22:37:00          | 27145.759           | 27139.241           | 27151.566           | 27146.727             | 153.11                | 153.09                | 153.04                | 152.93                          |
|                                | 11:10:00                       | 0:23:37:00          | 27192.009           | 27188.050           | 27182.061           | 27166.552             | 153.30                | 153.28                | 153.23                | 153.09                          |
|                                | 12:10:00                       | 1:00:37:00          | 27197.069           | 27193.098           | 27188.585           | 27186.488             | 153.37                | 153.35                | 153.30                | 153.17                          |
|                                | 13:10:00                       | 1:01:37:00          | 27196.665           | 27190.349           | 27197.196           | 27190.669             | 153.41                | 153.39                | 153.33                | 153.21                          |
|                                | 14:10:00                       | 1:02:37:00          | 27196.737           | 27194.515           | 27202.602           | 27192.882             | 153.44                | 153.42                | 153.37                | 153.25                          |
|                                | 15:10:00                       | 1:03:37:00          | 27207.375           | 27194.487           | 27199.776           | 27197.269             | 153.47                | 153.46                | 153.41                | 153.28                          |

| <i>Data</i>                    |                                |                     |                     |                     |                     |                       |                       |                       |                       |          |
|--------------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| 9443Q-16E                      |                                | 9508Q-16E           | 9506Q-16E           | 9443Q-16E           | 9439Q-16E           | 9508Q-16E             | 9506Q-16E             | 9443Q-16E             | 9439Q-16E             |          |
| Real Time<br>(mmm dd,yy 24 hr) | Elapsed Time<br>(DDD:HH:MM:SS) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Comments |
| 16:10:00                       | 1:04:37:00                     | 27205.500           | 27201.648           | 27210.131           | 27201.305           | 153.50                | 153.49                | 153.43                | 153.31                |          |
| 17:10:00                       | 1:05:37:00                     | 27213.855           | 27203.950           | 27212.273           | 27207.554           | 153.53                | 153.51                | 153.46                | 153.34                |          |
| 18:10:00                       | 1:06:37:00                     | 27213.466           | 27209.648           | 27220.504           | 27212.516           | 153.56                | 153.54                | 153.48                | 153.37                |          |
| 19:10:00                       | 1:07:37:00                     | 27217.877           | 27214.169           | 27221.613           | 27214.936           | 153.58                | 153.57                | 153.52                | 153.39                |          |
| 20:10:00                       | 1:08:37:00                     | 27055.598           | 27049.998           | 27067.455           | 27082.751           | 153.51                | 153.50                | 153.46                | 153.36                |          |
| 21:10:00                       | 1:09:37:00                     | 27040.755           | 27035.357           | 27047.203           | 27067.080           | 153.59                | 153.58                | 153.53                | 153.40                |          |
| 22:10:00                       | 1:10:37:00                     | 27065.044           | 27062.139           | 27072.586           | 27059.353           | 153.65                | 153.63                | 153.57                | 153.45                |          |
| 23:10:00                       | 1:11:37:00                     | 27088.437           | 27077.587           | 27083.567           | 27076.712           | 153.68                | 153.66                | 153.61                | 153.49                |          |
| Jan 09, 00                     | 00:10:00                       | 27088.636           | 27081.409           | 27087.257           | 27081.875           | 153.71                | 153.69                | 153.64                | 153.51                |          |
|                                | 01:10:00                       | 27090.703           | 27083.962           | 27089.811           | 27085.148           | 153.73                | 153.71                | 153.67                | 153.54                |          |
|                                | 02:10:00                       | 27085.643           | 27081.164           | 27093.186           | 27073.930           | 153.75                | 153.74                | 153.69                | 153.56                |          |
|                                | 03:10:00                       | 27097.880           | 27089.493           | 27096.781           | 27090.164           | 153.78                | 153.76                | 153.71                | 153.58                |          |
|                                | 04:10:00                       | 27094.535           | 27087.651           | 27097.904           | 27094.297           | 153.80                | 153.78                | 153.73                | 153.61                |          |
|                                | 05:10:00                       | 27100.210           | 27090.231           | 27099.453           | 27096.887           | 153.82                | 153.80                | 153.75                | 153.63                |          |
|                                | 06:10:00                       | 26842.113           | 26841.475           | 26894.958           | 26946.616           | 153.75                | 153.74                | 153.71                | 153.61                |          |
|                                | 07:10:00                       | 26837.600           | 26826.960           | 26796.308           | 26797.104           | 153.77                | 153.75                | 153.69                | 153.57                |          |
|                                | 08:10:00                       | 26846.590           | 26841.979           | 26823.131           | 26870.635           | 153.82                | 153.80                | 153.76                | 153.63                |          |
|                                | 09:10:00                       | 26816.562           | 26800.704           | 26836.542           | 26807.901           | 153.83                | 153.82                | 153.79                | 153.64                |          |
|                                | 10:10:00                       | 26857.688           | 26844.044           | 26813.743           | 26848.897           | 153.86                | 153.84                | 153.80                | 153.68                |          |
|                                | 11:10:00                       | 26825.003           | 26824.151           | 26873.795           | 26808.376           | 153.89                | 153.89                | 153.84                | 153.70                |          |
|                                | 12:10:00                       | 26826.978           | 26829.113           | 26878.750           | 26822.447           | 153.91                | 153.90                | 153.86                | 153.71                |          |
|                                | 13:10:00                       | 26825.089           | 26817.634           | 26874.992           | 26865.540           | 153.93                | 153.92                | 153.90                | 153.74                |          |
|                                | 14:10:00                       | 26836.400           | 26836.934           | 26892.409           | 26847.767           | 153.97                | 153.95                | 153.91                | 153.76                |          |
|                                | 15:10:00                       | 26857.631           | 26858.612           | 26882.680           | 26821.364           | 153.99                | 153.98                | 153.92                | 153.79                |          |
|                                | 16:10:00                       | 26856.081           | 26837.905           | 26881.563           | 26889.503           | 153.97                | 153.96                | 153.94                | 153.80                |          |
|                                | 17:10:00                       | 26886.665           | 26885.033           | 26885.349           | 26839.114           | 154.01                | 154.00                | 153.93                | 153.82                |          |
|                                | 18:10:00                       | 26882.463           | 26882.004           | 26892.241           | 26858.644           | 154.03                | 154.02                | 153.96                | 153.83                |          |
|                                | 19:10:00                       | 26866.775           | 26868.888           | 26900.002           | 26861.714           | 154.04                | 154.03                | 153.98                | 153.84                |          |
|                                | 20:10:00                       | 26850.732           | 26846.337           | 26899.973           | 26893.682           | 154.05                | 154.04                | 154.00                | 153.85                |          |
|                                | 21:10:00                       | 26857.886           | 26848.250           | 26893.094           | 26896.964           | 154.06                | 154.05                | 154.02                | 153.87                |          |
|                                | 22:10:00                       | 26863.147           | 26851.472           | 26889.214           | 26901.178           | 154.07                | 154.06                | 154.03                | 153.89                |          |
|                                | 23:10:00                       | 26878.802           | 26877.609           | 26909.460           | 26877.563           | 154.10                | 154.09                | 154.03                | 153.89                |          |
| Jan 10, 00                     | 00:10:00                       | 26888.208           | 26878.238           | 26864.767           | 26867.802           | 154.10                | 154.08                | 154.05                | 153.92                |          |
|                                | 01:10:00                       | 26876.848           | 26875.781           | 26915.369           | 26887.480           | 154.12                | 154.11                | 154.07                | 153.93                |          |
|                                | 02:10:00                       | 26896.428           | 26892.980           | 26911.795           | 26864.903           | 154.14                | 154.13                | 154.06                | 153.94                |          |
|                                | 03:10:00                       | 26879.230           | 26874.048           | 26913.535           | 26913.653           | 154.14                | 154.13                | 154.10                | 153.96                |          |
|                                | 04:10:00                       | 26887.536           | 26879.894           | 26910.266           | 26907.830           | 154.15                | 154.14                | 154.11                | 153.97                |          |
|                                | 05:10:00                       | 26896.440           | 26885.155           | 26885.446           | 26903.065           | 154.16                | 154.15                | 154.11                | 153.98                |          |
|                                | 06:10:00                       | 26878.313           | 26869.950           | 26903.278           | 26904.064           | 154.18                | 154.17                | 154.12                | 153.99                |          |



| <b>Data</b>                    |                                |                     |                     |                     |                     |                       |                       |                       |                       |                            |
|--------------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|
| 9443Q-16E                      |                                | 9508Q-16E           | 9506Q-16E           | 9443Q-16E           | 9439Q-16E           | 9508Q-16E             | 9506Q-16E             | 9443Q-16E             | 9439Q-16E             |                            |
| Real Time<br>(mmm dd,yy 24 hr) | Elapsed Time<br>(DDD:HH:MM:SS) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Comments                   |
| 07:10:00                       | 2:19:37:00                     | 26899.167           | 26888.218           | 26902.724           | 26926.641           | 154.18                | 154.17                | 154.14                | 154.00                |                            |
| 08:10:00                       | 2:20:37:00                     | 26909.753           | 26895.967           | 26877.060           | 26887.592           | 154.21                | 154.19                | 154.14                | 154.02                |                            |
| 09:10:00                       | 2:21:37:00                     | 26903.280           | 26881.320           | 26899.699           | 26923.782           | 154.20                | 154.19                | 154.16                | 154.03                |                            |
| 10:10:00                       | 2:22:37:00                     | 26923.497           | 26913.475           | 26915.374           | 26890.637           | 154.22                | 154.21                | 154.16                | 154.03                |                            |
| 11:10:00                       | 2:23:37:00                     | 26916.136           | 26911.823           | 26938.778           | 26910.998           | 154.24                | 154.22                | 154.17                | 154.04                |                            |
| 12:10:00                       | 3:00:37:00                     | 26898.987           | 26885.049           | 26896.312           | 26907.149           | 154.23                | 154.22                | 154.17                | 154.05                |                            |
| 13:10:00                       | 3:01:37:00                     | 26906.416           | 26893.717           | 26884.050           | 26895.663           | 154.25                | 154.24                | 154.19                | 154.06                |                            |
| 14:10:00                       | 3:02:37:00                     | 26932.623           | 26918.990           | 26929.578           | 26924.995           | 154.22                | 154.20                | 154.16                | 154.05                |                            |
| 15:10:00                       | 3:03:37:00                     | 26929.769           | 26918.637           | 26922.421           | 26903.791           | 154.27                | 154.26                | 154.21                | 154.08                |                            |
| 16:10:00                       | 3:04:37:00                     | 26916.200           | 26906.949           | 26888.169           | 26904.959           | 154.26                | 154.25                | 154.20                | 154.09                |                            |
| 17:10:00                       | 3:05:37:00                     | 26882.746           | 26874.684           | 26913.073           | 26931.788           | 154.26                | 154.25                | 154.21                | 154.07                |                            |
| 18:10:00                       | 3:06:37:00                     | 26937.121           | 26917.183           | 26922.886           | 26919.736           | 154.25                | 154.23                | 154.18                | 154.08                |                            |
| 19:10:00                       | 3:07:37:00                     | 26938.763           | 26927.469           | 26922.594           | 26922.391           | 154.27                | 154.26                | 154.21                | 154.11                |                            |
| 20:10:00                       | 3:08:37:00                     | 26933.432           | 26923.298           | 26934.959           | 26925.931           | 154.29                | 154.28                | 154.24                | 154.12                |                            |
| 21:10:00                       | 3:09:37:00                     | 26920.122           | 26905.738           | 26891.153           | 26882.624           | 154.31                | 154.29                | 154.24                | 154.11                |                            |
| 22:10:00                       | 3:10:37:00                     | 26890.482           | 26883.890           | 26921.559           | 26897.573           | 154.31                | 154.29                | 154.24                | 154.11                |                            |
| 23:10:00                       | 3:11:37:00                     | 26904.866           | 26899.905           | 26938.390           | 26922.469           | 154.31                | 154.29                | 154.24                | 154.11                |                            |
| Jan 11, 00 00:10:00            | 3:12:37:00                     | 26942.556           | 26930.583           | 26936.495           | 26925.174           | 154.31                | 154.30                | 154.24                | 154.13                |                            |
| 01:10:00                       | 3:13:37:00                     | 26934.540           | 26924.392           | 26935.934           | 26924.313           | 154.33                | 154.32                | 154.28                | 154.15                |                            |
| 02:10:00                       | 3:14:37:00                     | 26906.088           | 26891.752           | 26892.117           | 26899.231           | 154.33                | 154.32                | 154.27                | 154.14                |                            |
| 03:10:00                       | 3:15:37:00                     | 26895.826           | 26883.252           | 26901.971           | 26919.555           | 154.33                | 154.32                | 154.27                | 154.14                |                            |
| 04:10:00                       | 3:16:37:00                     | 26902.463           | 26896.194           | 26939.091           | 26932.972           | 154.34                | 154.32                | 154.27                | 154.14                |                            |
| 05:10:00                       | 3:17:37:00                     | 26904.732           | 26894.524           | 26913.721           | 26927.842           | 154.35                | 154.33                | 154.30                | 154.16                |                            |
| 06:10:00                       | 3:18:37:00                     | 26935.931           | 26924.857           | 26936.942           | 26929.651           | 154.35                | 154.34                | 154.29                | 154.17                |                            |
| 07:10:00                       | 3:19:37:00                     | 26898.951           | 26882.599           | 26895.744           | 26909.261           | 154.36                | 154.34                | 154.30                | 154.17                |                            |
| 08:10:00                       | 3:20:37:00                     | 26935.350           | 26919.829           | 26926.805           | 26923.597           | 154.34                | 154.33                | 154.27                | 154.17                |                            |
| 09:10:00                       | 3:21:37:00                     | 26936.094           | 26924.857           | 26927.556           | 26894.979           | 154.38                | 154.36                | 154.31                | 154.18                |                            |
| 10:10:00                       | 3:22:37:00                     | 26934.618           | 26923.207           | 26921.599           | 26887.117           | 154.38                | 154.37                | 154.32                | 154.19                |                            |
| 11:10:00                       | 3:23:37:00                     | 26900.121           | 26893.713           | 26932.444           |                     | 154.36                | 154.35                | 154.31                |                       |                            |
| 12:10:00                       | 4:00:37:00                     | 26937.422           | 26922.069           | 26926.785           |                     | 154.36                | 154.35                | 154.30                |                       |                            |
| 13:10:00                       | 4:01:37:00                     | 26937.549           | 26926.491           | 26932.128           |                     | 154.40                | 154.38                | 154.34                |                       |                            |
| 13:28:17                       | 4:01:55:17                     |                     |                     |                     | 26886.318           |                       |                       |                       | 154.19                | 9439Q-16E Recorder Failure |
| 14:28:20                       | 4:02:55:20                     | 26940.360           | 26929.111           | 26928.251           |                     | 154.40                | 154.39                | 154.33                |                       |                            |
| 15:28:20                       | 4:03:55:20                     | 26911.249           | 26897.997           | 26894.437           |                     | 154.39                | 154.37                | 154.32                |                       |                            |
| 16:28:20                       | 4:04:55:20                     | 26934.344           | 26920.291           | 26930.946           |                     | 154.38                | 154.36                | 154.34                |                       |                            |
| 17:28:20                       | 4:05:55:20                     | 26923.909           | 26908.845           | 26899.582           |                     | 154.41                | 154.40                | 154.35                |                       |                            |
| 17:55:00                       | 4:06:22:00                     | 26978.966           | 26894.353           | 26906.493           |                     | 154.39                | 154.38                | 154.34                |                       | Shut-In Date & Time        |
| 18:55:00                       | 4:07:22:00                     | 27811.573           | 27800.158           | 27809.525           |                     | 153.59                | 153.59                | 153.52                |                       |                            |
| 19:55:00                       | 4:08:22:00                     | 27823.556           | 27812.838           | 27821.716           |                     | 152.96                | 152.97                | 152.91                |                       |                            |

| <b>Data</b>                    |                                |                     |                     |                     |                     |                       |                       |                       |                       |          |
|--------------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| 9443Q-16E                      |                                | 9508Q-16E           | 9506Q-16E           | 9443Q-16E           | 9439Q-16E           | 9508Q-16E             | 9506Q-16E             | 9443Q-16E             | 9439Q-16E             |          |
| Real Time<br>(mmm dd,yy 24 hr) | Elapsed Time<br>(DDD:HH:MM:SS) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Comments |
| 20:55:00                       | 4:09:22:00                     | 27830.200           | 27819.574           | 27828.837           |                     | 152.65                | 152.67                | 152.63                |                       |          |
| 21:55:00                       | 4:10:22:00                     | 27834.488           | 27823.979           | 27833.155           |                     | 152.43                | 152.45                | 152.43                |                       |          |
| 22:55:00                       | 4:11:22:00                     | 27837.699           | 27827.151           | 27836.194           |                     | 152.26                | 152.29                | 152.26                |                       |          |
| 23:55:00                       | 4:12:22:00                     | 27840.144           | 27829.582           | 27840.687           |                     | 152.13                | 152.17                | 152.14                |                       |          |
| Jan 12, 00                     | 00:55:00                       | 27842.241           | 27831.582           | 27842.722           |                     | 152.03                | 152.06                | 152.03                |                       |          |
|                                | 01:55:00                       | 27843.969           | 27833.259           | 27844.658           |                     | 151.94                | 151.98                | 151.94                |                       |          |
|                                | 02:55:00                       | 27845.394           | 27834.663           | 27844.176           |                     | 151.86                | 151.91                | 151.87                |                       |          |
|                                | 03:55:00                       | 27846.707           | 27835.914           | 27847.078           |                     | 151.79                | 151.84                | 151.79                |                       |          |
|                                | 04:55:00                       | 27847.796           | 27836.986           | 27848.252           |                     | 151.73                | 151.78                | 151.74                |                       |          |
|                                | 05:55:00                       | 27848.655           | 27837.871           | 27849.189           |                     | 151.67                | 151.72                | 151.68                |                       |          |
|                                | 06:55:00                       | 27849.582           | 27838.738           | 27850.097           |                     | 151.62                | 151.67                | 151.63                |                       |          |
|                                | 07:55:00                       | 27850.349           | 27839.486           | 27850.880           |                     | 151.58                | 151.63                | 151.59                |                       |          |
|                                | 08:55:00                       | 27851.133           | 27840.140           | 27849.982           |                     | 151.54                | 151.58                | 151.55                |                       |          |
|                                | 09:55:00                       | 27851.620           | 27840.730           | 27852.128           |                     | 151.50                | 151.55                | 151.51                |                       |          |
|                                | 10:55:00                       | 27852.273           | 27841.291           | 27850.809           |                     | 151.47                | 151.51                | 151.49                |                       |          |
|                                | 11:55:00                       | 27852.864           | 27841.732           | 27851.503           |                     | 151.43                | 151.48                | 151.44                |                       |          |
|                                | 12:55:00                       | 27853.387           | 27842.150           | 27852.023           |                     | 151.40                | 151.45                | 151.42                |                       |          |
|                                | 13:55:00                       | 27853.801           | 27842.614           | 27852.041           |                     | 151.38                | 151.42                | 151.40                |                       |          |
|                                | 14:55:00                       | 27854.259           | 27843.046           | 27854.561           |                     | 151.35                | 151.40                | 151.36                |                       |          |
|                                | 15:55:00                       | 27854.642           | 27843.462           | 27854.713           |                     | 151.33                | 151.37                | 151.33                |                       |          |
|                                | 16:55:00                       | 27854.966           | 27843.727           | 27855.370           |                     | 151.31                | 151.35                | 151.31                |                       |          |
|                                | 17:55:00                       | 27855.389           | 27844.069           | 27855.465           |                     | 151.29                | 151.33                | 151.29                |                       |          |
|                                | 18:55:00                       | 27855.791           | 27844.431           | 27855.710           |                     | 151.27                | 151.31                | 151.26                |                       |          |
|                                | 19:55:00                       | 27856.141           | 27844.633           | 27854.376           |                     | 151.26                | 151.29                | 151.25                |                       |          |
|                                | 20:55:00                       | 27856.555           | 27845.025           | 27854.614           |                     | 151.24                | 151.28                | 151.24                |                       |          |
|                                | 21:55:00                       | 27856.862           | 27845.288           | 27856.561           |                     | 151.22                | 151.26                | 151.21                |                       |          |
|                                | 22:55:00                       | 27857.074           | 27845.510           | 27856.813           |                     | 151.21                | 151.25                | 151.20                |                       |          |
|                                | 23:55:00                       | 27857.376           | 27845.793           | 27857.102           |                     | 151.20                | 151.23                | 151.18                |                       |          |
| Jan 13, 00                     | 00:55:00                       | 27857.767           | 27845.968           | 27855.727           |                     | 151.18                | 151.21                | 151.17                |                       |          |
|                                | 01:55:00                       | 27857.939           | 27846.225           | 27857.522           |                     | 151.17                | 151.20                | 151.16                |                       |          |
|                                | 02:55:00                       | 27858.211           | 27846.394           | 27856.477           |                     | 151.16                | 151.19                | 151.15                |                       |          |
|                                | 03:55:00                       | 27858.467           | 27846.744           | 27858.079           |                     | 151.16                | 151.18                | 151.14                |                       |          |
|                                | 04:55:00                       | 27858.662           | 27846.949           | 27856.627           |                     | 151.15                | 151.17                | 151.13                |                       |          |
|                                | 05:55:00                       | 27858.894           | 27847.129           | 27858.741           |                     | 151.14                | 151.17                | 151.11                |                       |          |
|                                | 06:55:00                       | 27859.134           | 27847.252           | 27857.187           |                     | 151.14                | 151.16                | 151.12                |                       |          |
|                                | 07:55:00                       | 27859.319           | 27847.355           | 27859.207           |                     | 151.15                | 151.16                | 151.12                |                       |          |
|                                | 08:55:00                       | 27859.469           | 27847.516           | 27859.306           |                     | 151.17                | 151.18                | 151.14                |                       |          |
|                                | 09:55:00                       | 27859.516           | 27847.590           | 27859.524           |                     | 151.17                | 151.25                | 151.21                |                       |          |
|                                | 10:55:00                       | 27859.984           | 27847.882           | 27859.609           |                     | 151.18                | 151.29                | 151.23                |                       |          |



| <b>Data</b>                    |                                |                     |                     |                     |                     |                       |                       |                       |                       |          |
|--------------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| 9443Q-16E                      |                                | 9508Q-16E           | 9506Q-16E           | 9443Q-16E           | 9439Q-16E           | 9508Q-16E             | 9506Q-16E             | 9443Q-16E             | 9439Q-16E             |          |
| Real Time<br>(mmm dd,yy 24 hr) | Elapsed Time<br>(DDD:HH:MM:SS) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Comments |
| 11:55:00                       | 6:00:22:00                     | 27859.858           | 27848.227           | 27859.842           |                     | 151.20                | 151.29                | 151.24                |                       |          |
| 12:55:00                       | 6:01:22:00                     | 27860.378           | 27848.381           | 27858.302           |                     | 151.18                | 151.29                | 151.24                |                       |          |
| 13:55:00                       | 6:02:22:00                     | 27860.611           | 27848.505           | 27858.681           |                     | 151.18                | 151.29                | 151.23                |                       |          |
| 14:55:00                       | 6:03:22:00                     | 27860.621           | 27848.644           | 27860.629           |                     | 151.17                | 151.29                | 151.23                |                       |          |
| 15:55:00                       | 6:04:22:00                     | 27860.961           | 27848.834           | 27858.994           |                     | 151.17                | 151.29                | 151.23                |                       |          |
| 16:55:00                       | 6:05:22:00                     | 27861.100           | 27848.907           | 27860.928           |                     | 151.17                | 151.29                | 151.23                |                       |          |
| 17:55:00                       | 6:06:22:00                     | 27861.402           | 27849.097           | 27859.424           |                     | 151.16                | 151.28                | 151.22                |                       |          |
| 18:55:00                       | 6:07:22:00                     | 27861.549           | 27849.345           | 27861.111           |                     | 151.16                | 151.28                | 151.21                |                       |          |
| 19:55:00                       | 6:08:22:00                     | 27861.750           | 27849.458           | 27861.358           |                     | 151.16                | 151.27                | 151.22                |                       |          |
| 20:55:00                       | 6:09:22:00                     | 27861.998           | 27849.602           | 27861.424           |                     | 151.16                | 151.27                | 151.21                |                       |          |
| 21:55:00                       | 6:10:22:00                     | 27862.192           | 27849.767           | 27861.559           |                     | 151.15                | 151.26                | 151.21                |                       |          |
| 22:55:00                       | 6:11:22:00                     | 27862.370           | 27849.922           | 27860.279           |                     | 151.15                | 151.26                | 151.20                |                       |          |
| 23:55:00                       | 6:12:22:00                     | 27862.649           | 27850.019           | 27861.957           |                     | 151.15                | 151.26                | 151.20                |                       |          |
| Jan 14, 00 00:55:00            | 6:13:22:00                     | 27862.689           | 27850.215           | 27860.537           |                     | 151.14                | 151.26                | 151.20                |                       |          |
| 01:55:00                       | 6:14:22:00                     | 27862.852           | 27850.246           | 27862.434           |                     | 151.13                | 151.26                | 151.19                |                       |          |
| 02:55:00                       | 6:15:22:00                     | 27862.999           | 27850.426           | 27862.324           |                     | 151.13                | 151.26                | 151.19                |                       |          |
| 03:55:00                       | 6:16:22:00                     | 27863.154           | 27850.493           | 27862.573           |                     | 151.13                | 151.27                | 151.18                |                       |          |
| 04:55:00                       | 6:17:22:00                     | 27863.370           | 27850.689           | 27861.128           |                     | 151.13                | 151.27                | 151.18                |                       |          |
| 05:55:00                       | 6:18:22:00                     | 27863.534           | 27850.833           | 27861.780           |                     | 151.12                | 151.26                | 151.18                |                       |          |
| 06:55:00                       | 6:19:22:00                     | 27863.719           | 27850.915           | 27862.889           |                     | 151.12                | 151.26                | 151.18                |                       |          |
| 07:55:00                       | 6:20:22:00                     | 27863.905           | 27851.018           | 27863.250           |                     | 151.11                | 151.26                | 151.17                |                       |          |
| 08:55:00                       | 6:21:22:00                     | 27864.021           | 27851.203           | 27861.750           |                     | 151.11                | 151.26                | 151.17                |                       |          |
| 09:55:00                       | 6:22:22:00                     | 27864.246           | 27851.312           | 27861.670           |                     | 151.11                | 151.26                | 151.18                |                       |          |
| 10:55:00                       | 6:23:22:00                     | 27864.393           | 27851.476           | 27863.694           |                     | 151.11                | 151.26                | 151.16                |                       |          |
| 11:55:00                       | 7:00:22:00                     | 27864.594           | 27851.569           | 27862.086           |                     | 151.10                | 151.26                | 151.17                |                       |          |
| 12:55:00                       | 7:01:22:00                     | 27864.632           | 27851.688           | 27863.873           |                     | 151.10                | 151.26                | 151.16                |                       |          |
| 13:55:00                       | 7:02:22:00                     | 27864.748           | 27851.703           | 27863.913           |                     | 151.10                | 151.25                | 151.16                |                       |          |
| 14:55:00                       | 7:03:22:00                     | 27864.988           | 27851.888           | 27864.102           |                     | 151.10                | 151.25                | 151.16                |                       |          |
| 15:55:00                       | 7:04:22:00                     | 27865.174           | 27851.955           | 27862.777           |                     | 151.10                | 151.25                | 151.16                |                       |          |
| 16:55:00                       | 7:05:22:00                     | 27865.397           | 27852.063           | 27864.477           |                     | 151.11                | 151.25                | 151.15                |                       |          |
| 17:55:00                       | 7:06:22:00                     | 27865.358           | 27852.208           | 27864.575           |                     | 151.11                | 151.25                | 151.16                |                       |          |
| 18:55:00                       | 7:07:22:00                     | 27865.590           | 27852.192           | 27864.728           |                     | 151.10                | 151.25                | 151.16                |                       |          |
| 19:55:00                       | 7:08:22:00                     | 27865.668           | 27852.424           | 27864.823           |                     | 151.10                | 151.25                | 151.16                |                       |          |
| 20:55:00                       | 7:09:22:00                     | 27865.761           | 27852.480           | 27864.848           |                     | 151.10                | 151.25                | 151.16                |                       |          |
| 21:55:00                       | 7:10:22:00                     | 27865.877           | 27852.655           | 27865.012           |                     | 151.10                | 151.25                | 151.16                |                       |          |
| 22:55:00                       | 7:11:22:00                     | 27865.970           | 27852.784           | 27865.121           |                     | 151.09                | 151.25                | 151.16                |                       |          |
| 23:55:00                       | 7:12:22:00                     | 27866.078           | 27852.877           | 27865.285           |                     | 151.09                | 151.25                | 151.16                |                       |          |
| Jan 15, 00 00:55:00            | 7:13:22:00                     | 27866.279           | 27852.959           | 27865.340           |                     | 151.09                | 151.25                | 151.16                |                       |          |
| 01:55:00                       | 7:14:22:00                     | 27866.426           | 27853.088           | 27865.558           |                     | 151.09                | 151.25                | 151.16                |                       |          |

| <i>Data</i>                    |                                |                     |                     |                     |                     |                       |                       |                       |                       |          |
|--------------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| 9443Q-16E                      |                                | 9508Q-16E           | 9506Q-16E           | 9443Q-16E           | 9439Q-16E           | 9508Q-16E             | 9506Q-16E             | 9443Q-16E             | 9439Q-16E             |          |
| Real Time<br>(mmm dd,yy 24 hr) | Elapsed Time<br>(DDD:HH:MM:SS) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Comments |
| 02:55:00                       | 7:15:22:00                     | 27866.627           | 27853.098           | 27865.518           |                     | 151.09                | 151.25                | 151.16                |                       |          |
| 03:55:00                       | 7:16:22:00                     | 27866.642           | 27853.273           | 27865.737           |                     | 151.09                | 151.25                | 151.16                |                       |          |
| 04:55:00                       | 7:17:22:00                     | 27866.804           | 27853.366           | 27865.806           |                     | 151.09                | 151.25                | 151.16                |                       |          |
| 05:55:00                       | 7:18:22:00                     | 27866.820           | 27853.412           | 27865.900           |                     | 151.09                | 151.25                | 151.16                |                       |          |
| 06:55:00                       | 7:19:22:00                     | 27867.152           | 27853.531           | 27864.470           |                     | 151.09                | 151.24                | 151.16                |                       |          |
| 07:55:00                       | 7:20:22:00                     | 27867.206           | 27853.613           | 27864.594           |                     | 151.09                | 151.24                | 151.16                |                       |          |
| 08:55:00                       | 7:21:22:00                     | 27867.407           | 27853.706           | 27864.637           |                     | 151.09                | 151.24                | 151.16                |                       |          |
| 09:55:00                       | 7:22:22:00                     | 27867.422           | 27853.901           | 27865.143           |                     | 151.09                | 151.24                | 151.17                |                       |          |
| 10:55:00                       | 7:23:22:00                     | 27867.623           | 27853.948           | 27866.650           |                     | 151.09                | 151.24                | 151.17                |                       |          |
| 11:55:00                       | 8:00:22:00                     | 27867.747           | 27854.004           | 27866.762           |                     | 151.09                | 151.25                | 151.18                |                       |          |
| 12:55:00                       | 8:01:22:00                     | 27867.870           | 27854.097           | 27866.955           |                     | 151.09                | 151.25                | 151.18                |                       |          |
| 13:55:00                       | 8:02:22:00                     | 27868.048           | 27854.215           | 27865.149           |                     | 151.09                | 151.24                | 151.19                |                       |          |
| 14:55:00                       | 8:03:22:00                     | 27868.234           | 27854.308           | 27867.082           |                     | 151.09                | 151.24                | 151.19                |                       |          |
| 15:55:00                       | 8:04:22:00                     | 27868.288           | 27854.390           | 27865.575           |                     | 151.09                | 151.24                | 151.20                |                       |          |
| 16:55:00                       | 8:05:22:00                     | 27868.427           | 27854.483           | 27867.242           |                     | 151.09                | 151.24                | 151.20                |                       |          |
| 17:55:00                       | 8:06:22:00                     | 27868.519           | 27854.504           | 27867.285           |                     | 151.09                | 151.24                | 151.20                |                       |          |
| 18:55:00                       | 8:07:22:00                     | 27868.574           | 27854.560           | 27867.438           |                     | 151.09                | 151.25                | 151.21                |                       |          |
| 19:55:00                       | 8:08:22:00                     | 27868.751           | 27854.699           | 27867.386           |                     | 151.09                | 151.25                | 151.21                |                       |          |
| 20:55:00                       | 8:09:22:00                     | 27868.913           | 27854.746           | 27866.025           |                     | 151.09                | 151.25                | 151.21                |                       |          |
| 21:55:00                       | 8:10:22:00                     | 27868.983           | 27854.849           | 27867.651           |                     | 151.09                | 151.25                | 151.22                |                       |          |
| 22:55:00                       | 8:11:22:00                     | 27869.091           | 27854.998           | 27867.684           |                     | 151.09                | 151.25                | 151.23                |                       |          |
| 23:55:00                       | 8:12:22:00                     | 27869.269           | 27854.962           | 27867.865           |                     | 151.09                | 151.25                | 151.23                |                       |          |
| Jan 16, 00 00:55:00            | 8:13:22:00                     | 27869.338           | 27855.137           | 27867.759           |                     | 151.10                | 151.25                | 151.24                |                       |          |
| 01:55:00                       | 8:14:22:00                     | 27869.578           | 27855.157           | 27867.802           |                     | 151.09                | 151.25                | 151.24                |                       |          |
| 02:55:00                       | 8:15:22:00                     | 27869.647           | 27855.214           | 27868.090           |                     | 151.09                | 151.25                | 151.24                |                       |          |
| 03:55:00                       | 8:16:22:00                     | 27869.678           | 27855.353           | 27868.078           |                     | 151.10                | 151.25                | 151.24                |                       |          |
| 04:55:00                       | 8:17:22:00                     | 27869.855           | 27855.363           | 27868.231           |                     | 151.10                | 151.25                | 151.25                |                       |          |
| 05:55:00                       | 8:18:22:00                     | 27869.910           | 27855.420           | 27866.964           |                     | 151.10                | 151.25                | 151.25                |                       |          |
| 06:55:00                       | 8:19:22:00                     | 27869.994           | 27855.559           | 27868.426           |                     | 151.10                | 151.25                | 151.25                |                       |          |
| 07:55:00                       | 8:20:22:00                     | 27870.133           | 27855.744           | 27868.579           |                     | 151.10                | 151.25                | 151.26                |                       |          |
| 08:55:00                       | 8:21:22:00                     | 27870.272           | 27855.755           | 27868.812           |                     | 151.10                | 151.25                | 151.26                |                       |          |
| 09:55:00                       | 8:22:22:00                     | 27870.458           | 27855.822           | 27868.639           |                     | 151.10                | 151.26                | 151.27                |                       |          |
| 10:55:00                       | 8:23:22:00                     | 27870.527           | 27855.878           | 27868.901           |                     | 151.10                | 151.26                | 151.27                |                       |          |
| 11:55:00                       | 9:00:22:00                     | 27870.612           | 27855.935           | 27868.956           |                     | 151.11                | 151.26                | 151.27                |                       |          |
| 12:55:00                       | 9:01:22:00                     | 27870.681           | 27856.074           | 27868.973           |                     | 151.11                | 151.26                | 151.28                |                       |          |
| 13:55:00                       | 9:02:22:00                     | 27870.836           | 27856.141           | 27869.082           |                     | 151.11                | 151.26                | 151.28                |                       |          |
| 14:55:00                       | 9:03:22:00                     | 27870.982           | 27856.151           | 27869.209           |                     | 151.11                | 151.26                | 151.28                |                       |          |
| 15:55:00                       | 9:04:22:00                     | 27871.028           | 27856.254           | 27869.197           |                     | 151.11                | 151.26                | 151.29                |                       |          |
| 16:55:00                       | 9:05:22:00                     | 27871.129           | 27856.357           | 27869.186           |                     | 151.12                | 151.26                | 151.29                |                       |          |



| <b>Data</b>                    |                                |                     |                     |                     |                     |                       |                       |                       |                       |                            |
|--------------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|
| 9443Q-16E                      |                                | 9508Q-16E           | 9506Q-16E           | 9443Q-16E           | 9439Q-16E           | 9508Q-16E             | 9506Q-16E             | 9443Q-16E             | 9439Q-16E             |                            |
| Real Time<br>(mmm dd,yy 24 hr) | Elapsed Time<br>(DDD:HH:MM:SS) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Comments                   |
| 17:55:00                       | 9:06:22:00                     | 27871.213           | 27856.377           | 27869.174           |                     | 151.12                | 151.27                | 151.29                |                       |                            |
| 18:55:00                       | 9:07:22:00                     | 27871.438           | 27856.527           | 27867.406           |                     | 151.11                | 151.27                | 151.30                |                       |                            |
| 19:55:00                       | 9:08:22:00                     | 27871.422           | 27856.491           | 27869.545           |                     | 151.12                | 151.27                | 151.30                |                       |                            |
| 20:55:00                       | 9:09:22:00                     | 27871.584           | 27856.640           | 27869.479           |                     | 151.12                | 151.27                | 151.30                |                       |                            |
| 21:55:00                       | 9:10:22:00                     | 27871.668           | 27856.686           | 27867.817           |                     | 151.12                | 151.27                | 151.31                |                       |                            |
| 22:55:00                       | 9:11:22:00                     | 27871.807           | 27856.671           | 27867.806           |                     | 151.13                | 151.27                | 151.31                |                       |                            |
| 23:55:00                       | 9:12:22:00                     | 27871.970           | 27856.820           | 27869.700           |                     | 151.13                | 151.27                | 151.30                |                       |                            |
| Jan 17, 00 00:55:00            | 9:13:22:00                     | 27872.039           | 27856.923           | 27869.835           |                     | 151.13                | 151.28                | 151.30                |                       |                            |
| 01:55:00                       | 9:14:22:00                     | 27872.317           | 27856.980           | 27869.892           |                     | 151.12                | 151.28                | 151.31                |                       |                            |
| 02:55:00                       | 9:15:22:00                     | 27872.294           | 27857.000           | 27868.338           |                     | 151.13                | 151.28                | 151.31                |                       |                            |
| 03:55:00                       | 9:16:22:00                     | 27872.363           | 27857.067           | 27870.243           |                     | 151.13                | 151.28                | 151.30                |                       |                            |
| 04:55:00                       | 9:17:22:00                     | 27872.518           | 27857.134           | 27868.481           |                     | 151.13                | 151.28                | 151.30                |                       |                            |
| 05:55:00                       | 9:18:22:00                     | 27872.602           | 27857.247           | 27868.631           |                     | 151.13                | 151.29                | 151.30                |                       |                            |
| 06:55:00                       | 9:19:22:00                     | 27872.741           | 27857.268           | 27868.918           |                     | 151.13                | 151.29                | 151.30                |                       |                            |
| 07:55:00                       | 9:20:22:00                     | 27872.826           | 27857.371           | 27868.743           |                     | 151.14                | 151.29                | 151.30                |                       |                            |
| 08:55:00                       | 9:21:22:00                     | 27872.856           | 27857.437           | 27870.640           |                     | 151.14                | 151.29                | 151.30                |                       |                            |
| 09:55:00                       | 9:22:22:00                     | 27873.010           | 27857.504           | 27870.697           |                     | 151.14                | 151.29                | 151.31                |                       |                            |
| 10:55:00                       | 9:23:22:00                     | 27873.080           | 27857.561           | 27870.631           |                     | 151.14                | 151.29                | 151.31                |                       |                            |
| 11:55:00                       | 10:00:22:00                    | 27873.188           | 27857.664           | 27870.769           |                     | 151.14                | 151.30                | 151.31                |                       |                            |
| 12:55:00                       | 10:01:22:00                    | 27873.273           | 27857.684           | 27869.039           |                     | 151.15                | 151.30                | 151.32                |                       |                            |
| 13:55:00                       | 10:02:22:00                    | 27873.427           | 27857.658           | 27870.867           |                     | 151.15                | 151.30                | 151.31                |                       |                            |
| 14:55:00                       | 10:03:22:00                    | 27873.574           | 27857.808           | 27870.990           |                     | 151.15                | 151.30                | 151.32                |                       |                            |
| 15:55:00                       | 10:04:22:00                    | 27873.620           | 27857.911           | 27871.073           |                     | 151.15                | 151.30                | 151.32                |                       |                            |
| 16:55:00                       | 10:05:22:00                    | 27873.665           | 27857.931           | 27871.062           |                     | 151.16                | 151.30                | 151.32                |                       |                            |
| 17:55:00                       | 10:06:22:00                    | 27873.774           | 27857.977           | 27871.185           |                     | 151.16                | 151.30                | 151.32                |                       |                            |
| 18:55:00                       | 10:07:22:00                    | 27873.867           | 27858.055           | 27871.200           |                     | 151.15                | 151.31                | 151.32                |                       |                            |
| 19:55:00                       | 10:08:22:00                    | 27873.966           | 27858.157           | 27871.337           |                     | 151.16                | 151.31                | 151.33                |                       |                            |
| 20:55:00                       | 10:09:22:00                    | 27874.066           | 27858.168           | 27871.447           |                     | 151.16                | 151.31                | 151.33                |                       |                            |
| 21:36:40                       | 10:10:03:40                    | 27874.175           | 27858.224           | 27871.501           |                     | 151.16                | 151.31                | 151.33                |                       | 9508Q-16E Recorder Failure |
| 22:36:40                       | 10:11:03:40                    |                     | 27858.337           | 27871.731           |                     |                       | 151.31                | 151.32                |                       |                            |
| 23:36:40                       | 10:12:03:40                    |                     | 27858.312           | 27871.639           |                     |                       | 151.32                | 151.33                |                       |                            |
| Jan 18, 00 00:36:40            | 10:13:03:40                    |                     | 27858.322           | 27871.682           |                     |                       | 151.32                | 151.33                |                       |                            |
| 01:36:40                       | 10:14:03:40                    |                     | 27858.389           | 27871.725           |                     |                       | 151.32                | 151.34                |                       |                            |
| 02:36:40                       | 10:15:03:40                    |                     | 27858.502           | 27871.765           |                     |                       | 151.32                | 151.33                |                       |                            |
| 03:36:40                       | 10:16:03:40                    |                     | 27858.579           | 27871.891           |                     |                       | 151.32                | 151.34                |                       |                            |
| 04:36:40                       | 10:17:03:40                    |                     | 27858.635           | 27871.865           |                     |                       | 151.33                | 151.34                |                       |                            |
| 05:36:40                       | 10:18:03:40                    |                     | 27858.774           | 27871.949           |                     |                       | 151.33                | 151.34                |                       |                            |
| 06:36:40                       | 10:19:03:40                    |                     | 27858.795           | 27871.992           |                     |                       | 151.33                | 151.35                |                       |                            |
| 07:36:40                       | 10:20:03:40                    |                     | 27858.779           | 27870.315           |                     |                       | 151.33                | 151.35                |                       |                            |

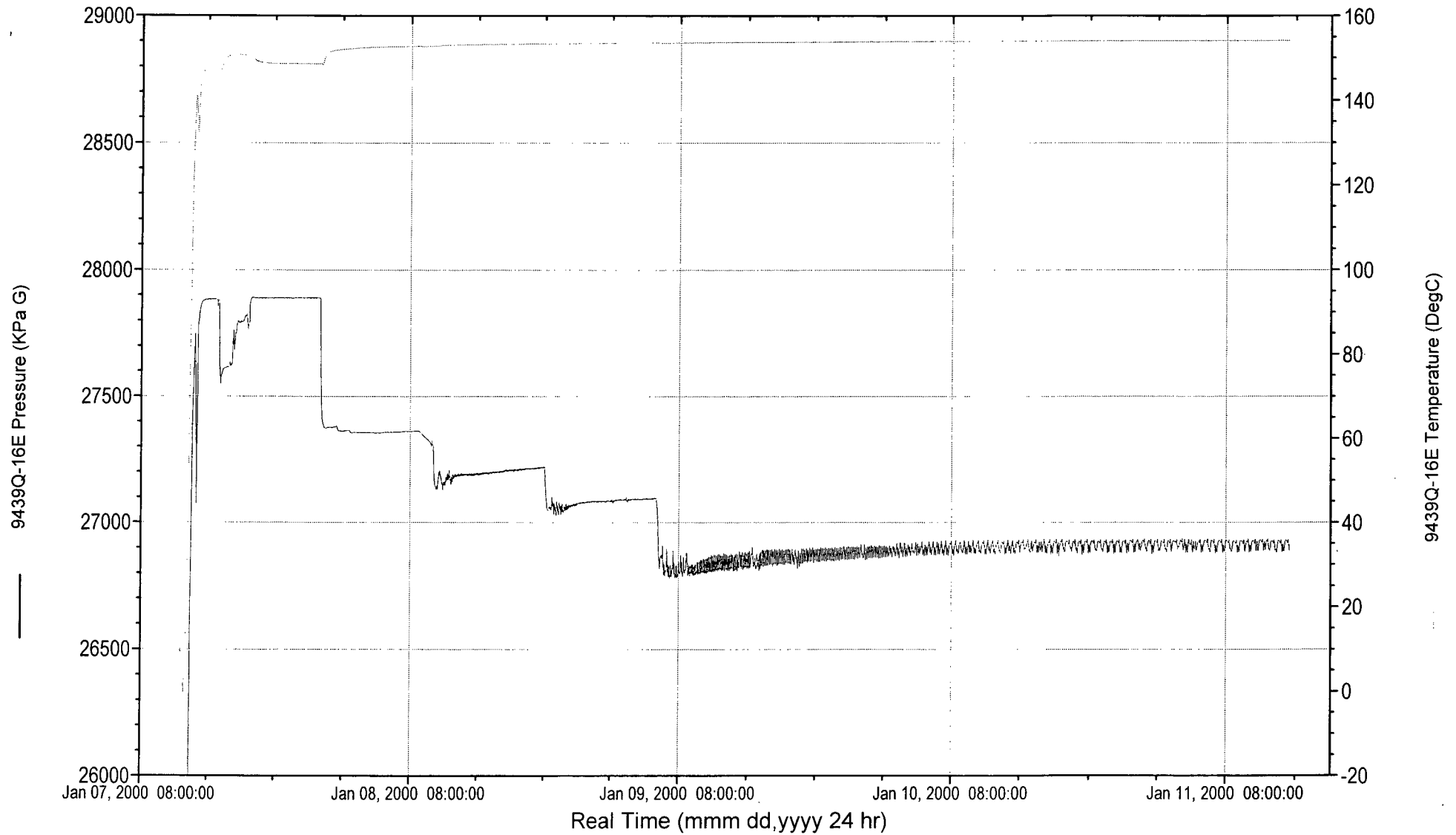
| <i>Data</i>                    |                                |                     |                     |                     |                     |                       |                       |                       |                       |                            |
|--------------------------------|--------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|
| 9443Q-16E                      |                                | 9508Q-16E           | 9506Q-16E           | 9443Q-16E           | 9439Q-16E           | 9508Q-16E             | 9506Q-16E             | 9443Q-16E             | 9439Q-16E             |                            |
| Real Time<br>(mmm dd,yy 24 hr) | Elapsed Time<br>(DDD:HH:MM:SS) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Pressure<br>(KPa G) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Temperature<br>(DegC) | Comments                   |
| 08:36:40                       | 10:21:03:40                    |                     | 27858.892           | 27872.253           |                     |                       | 151.33                | 151.35                |                       |                            |
| 09:36:40                       | 10:22:03:40                    |                     | 27858.866           | 27872.051           |                     |                       | 151.34                | 151.36                |                       |                            |
| 10:36:40                       | 10:23:03:40                    |                     | 27858.933           | 27872.393           |                     |                       | 151.34                | 151.36                |                       |                            |
| 11:36:40                       | 11:00:03:40                    |                     | 27859.118           | 27872.396           |                     |                       | 151.34                | 151.36                |                       |                            |
| 12:36:40                       | 11:01:03:40                    |                     | 27859.103           | 27872.370           |                     |                       | 151.34                | 151.37                |                       |                            |
| 13:36:40                       | 11:02:03:40                    |                     | 27859.123           | 27872.493           |                     |                       | 151.34                | 151.37                |                       |                            |
| 14:36:40                       | 11:03:03:40                    |                     | 27859.180           | 27872.332           |                     |                       | 151.35                | 151.37                |                       |                            |
| 15:36:40                       | 11:04:03:40                    |                     | 27859.256           | 27870.411           |                     |                       | 151.35                | 151.38                |                       |                            |
| 16:36:40                       | 11:05:03:40                    |                     |                     | 27870.520           |                     |                       |                       | 151.38                |                       |                            |
| 17:27:45                       | 11:05:54:45                    |                     | 27859.528           |                     |                     |                       | 151.36                |                       |                       | 9506Q-16E Recorder Failure |
| 18:27:50                       | 11:06:54:50                    |                     |                     | 27872.336           |                     |                       |                       | 151.38                |                       |                            |
| 19:27:50                       | 11:07:54:50                    |                     |                     | 27872.529           |                     |                       |                       | 151.38                |                       |                            |
| 20:27:50                       | 11:08:54:50                    |                     |                     | 27870.990           |                     |                       |                       | 151.39                |                       |                            |
| 21:27:50                       | 11:09:54:50                    |                     |                     | 27872.709           |                     |                       |                       | 151.39                |                       |                            |
| 22:27:50                       | 11:10:54:50                    |                     |                     | 27872.643           |                     |                       |                       | 151.39                |                       |                            |
| 23:15:25                       | 11:11:42:25                    |                     |                     | 7.399               |                     |                       |                       | 7.19                  |                       | 9443Q-16E Recorder Failure |



## Pressure & Temperature vs. Real Time

Company: Lee Tool, Div. of Schlumberger  
Client: Chevron Canada Resources  
Remarks: 9439Q-16E Landed @ 3440.04 mCF

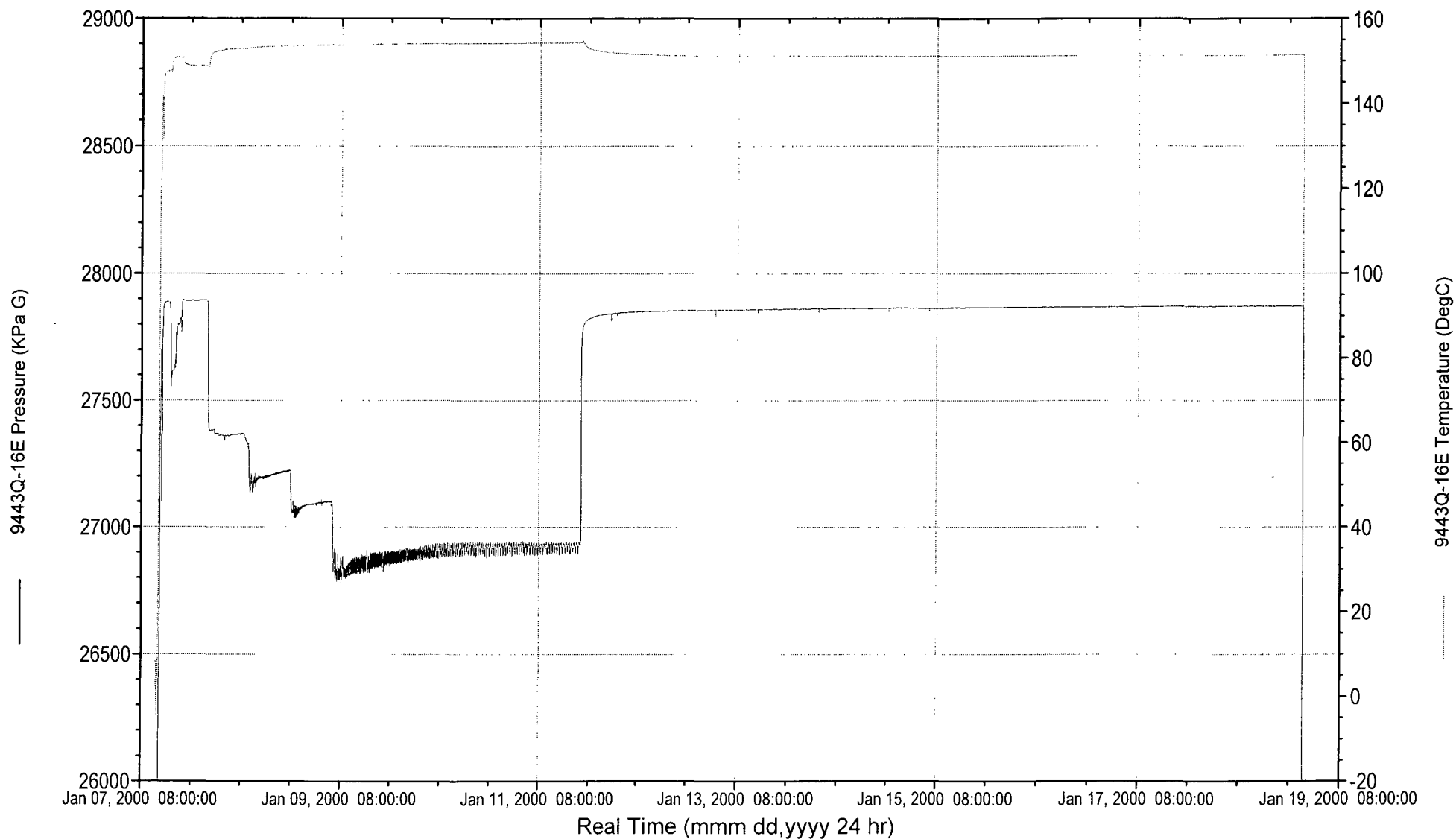
Field: Liard  
Well Name: Chevron et al Liard  
Well Number: M-25



## Pressure & Temperature vs. Real Time

Company: Lee Tool, Div. of Schlumberger  
Client: Chevron Canada Resources  
Remarks: 9443Q-16E Landed @ 3441.04 mCF

Field: Liard  
Well Name: Chevron et al Liard  
Well Number: M-25

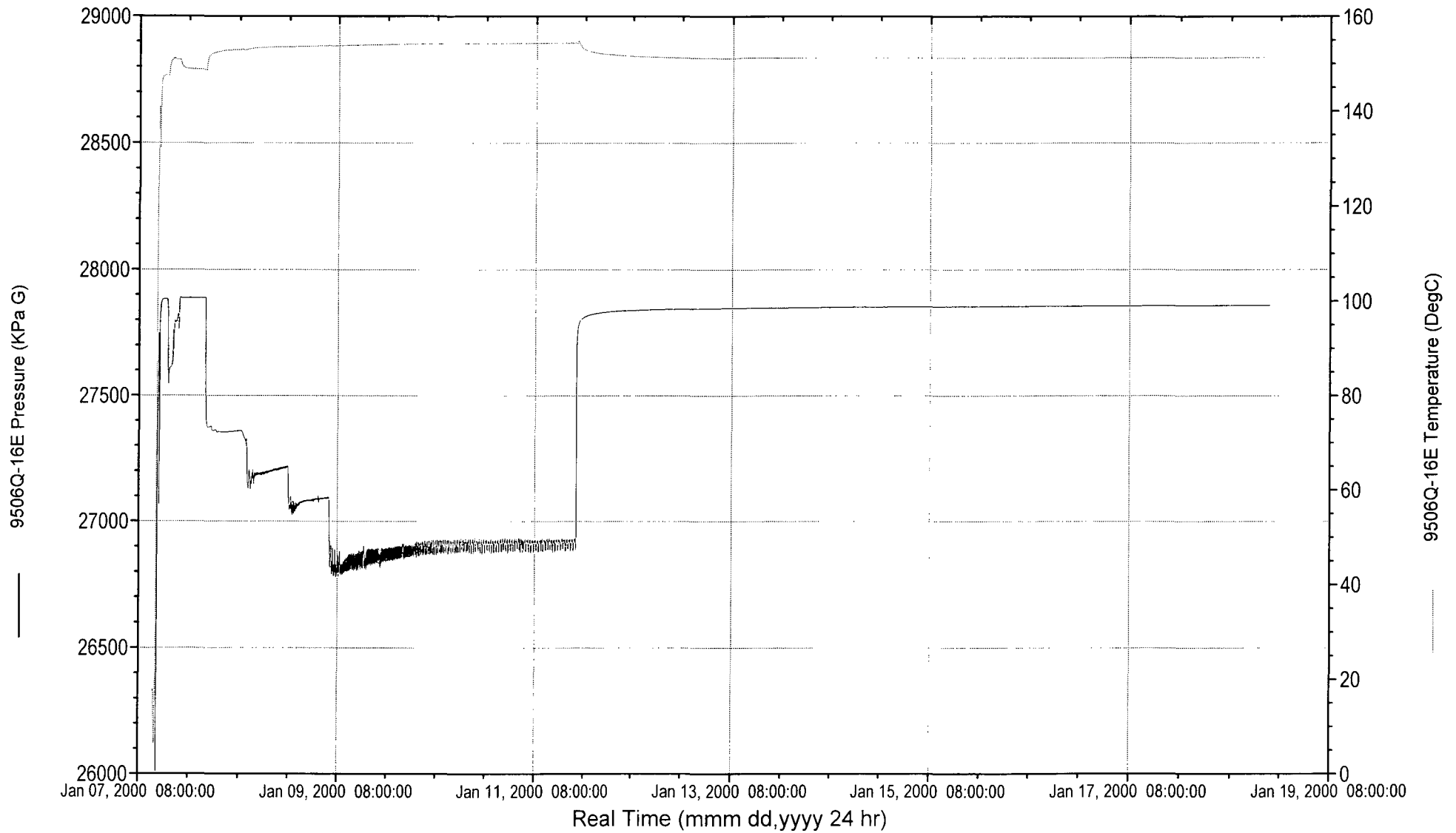




## Pressure & Temperature vs. Real Time

Company: Lee Tool, Div. of Schlumberger  
Client: Chevron Canada Resources  
Remarks: 9506Q-16E Landed @ 3442.04 mCF

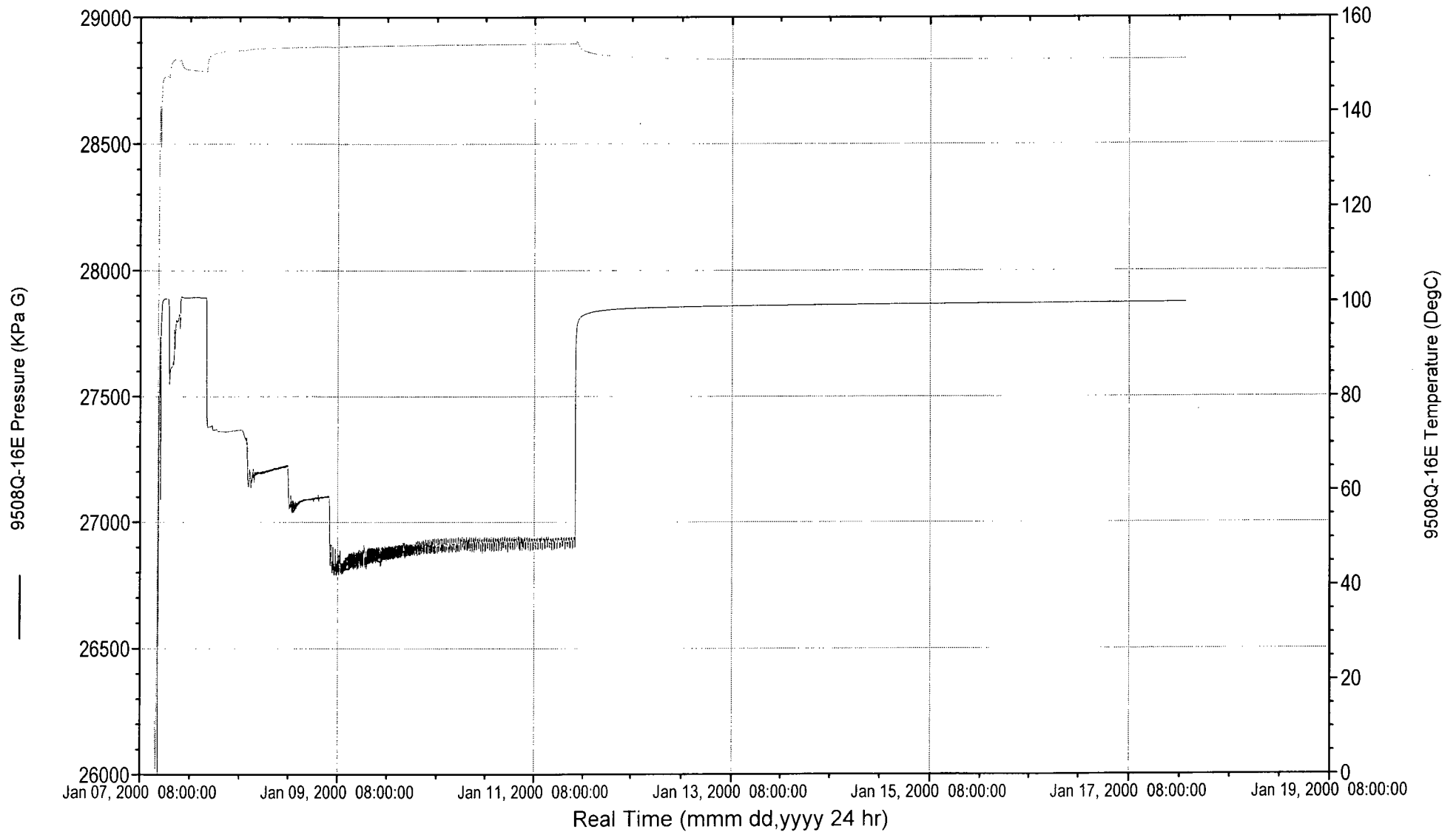
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Well Number: M-25



## Pressure & Temperature vs. Real Time

Company: Lee Tool, Div. of Schlumberger  
Client: Chevron Canada Resources  
Remarks: 9508Q-16E Landed @ 3443.04 mCF

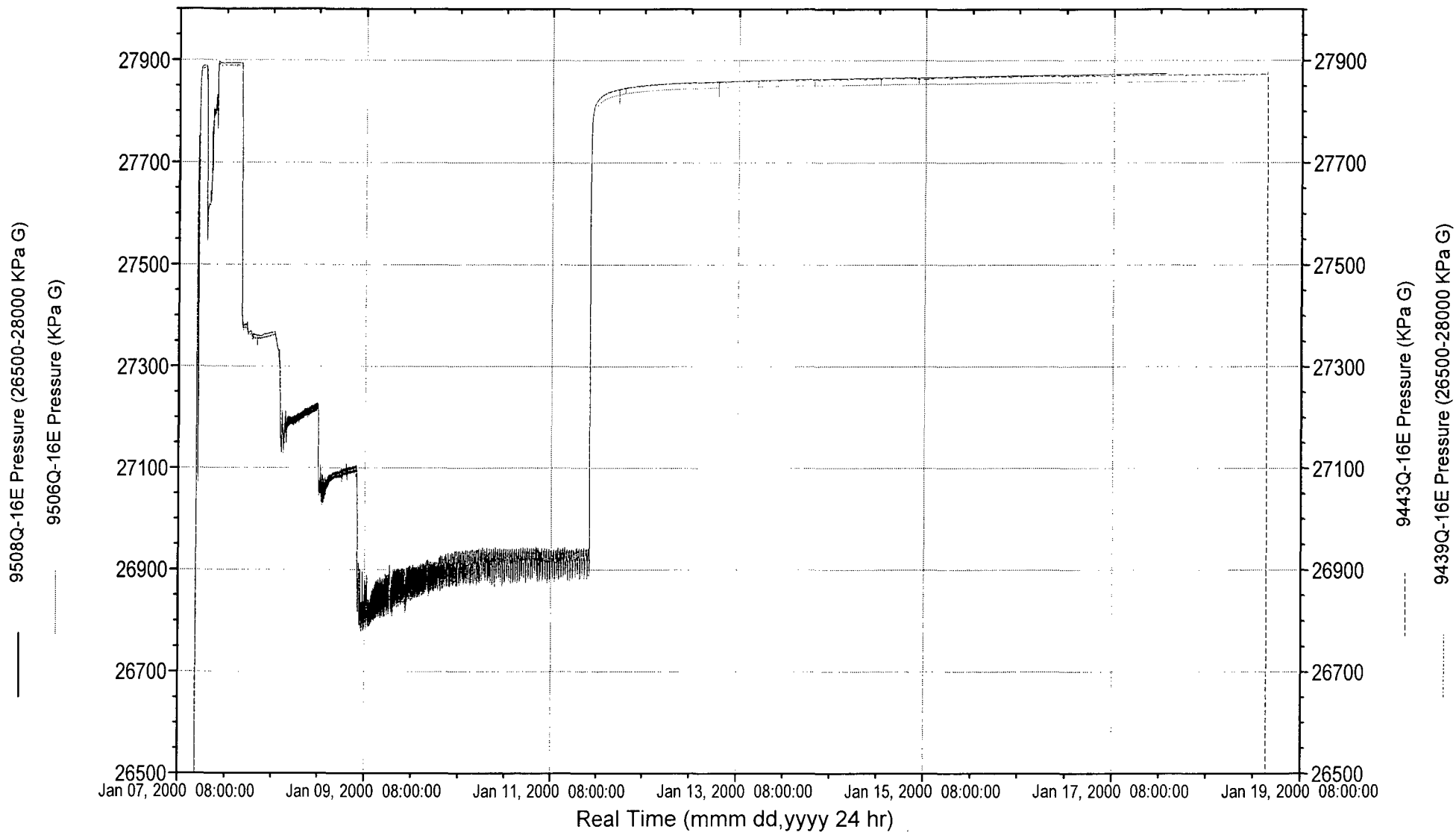
Field: Liard  
Well Name: Chevron et al Liard  
Well Number: M-25



## Pressure vs. Real Time

Company: Lee Tool, Div. of Schlumberger  
Client: Chevron Canada Resources  
Remarks: Lee Memory Recorders (Top 2 Tandem Sets)

Field: Liard  
Well Name: Chevron et al Liard  
Well Number: M-25





## Temperature vs. Real Time

Company: **Lee Tool, Div. of Schlumberger**  
Client: **Chevron Canada Resources**  
Remarks: **Lee Memory Recorders (Top 2 Tandem Sets)**

Field: **Liard**  
Well Name: **Chevron et al Liard**  
Well Number: **M-25**

