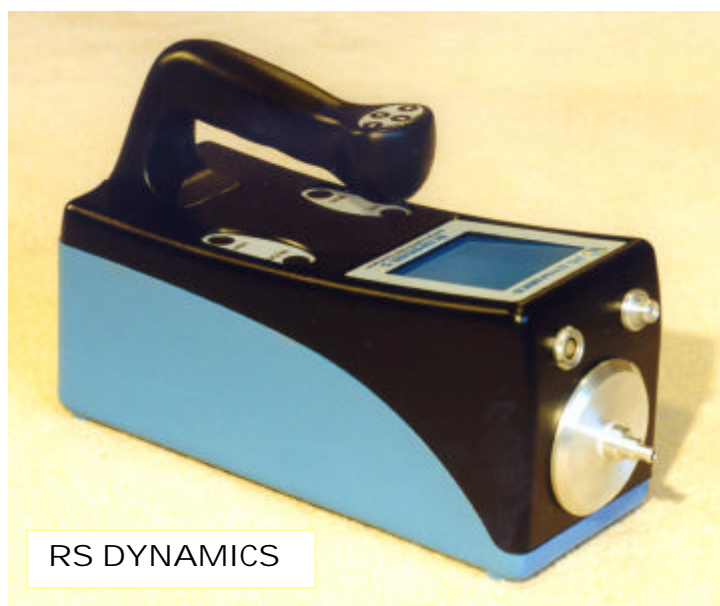




Transferring data from Ecoprobe 5 to a personal computer

User Manual





**Communication and Data Acquisition
Software**

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1. Introduction

Data collected by and saved in Ecoprobe 5 can be transferred with the aid of a user-friendly program to a computer for evaluation and processing. This operation can be performed either in the field or in the office.

2. Installing Communication Program *Ecoprobe Plus*

To use *Ecoprobe Plus* you need:

- Personal computer with a 486 or higher processor (Pentium family recommended)
- Microsoft Windows 95/98/2000/NT 4.0 operating system
- 16 MB of memory
- Typical hard-disk space required: 25MB

Installation Instructions:

- Insert disk into the appropriate CD drive.
- Select the Setup.exe file.
- For automatic setup procedure double click the Setup.exe file
- Follow the instruction on the screen

3. Start-up and establishing communication with Ecoprobe 5

- Connect Ecoprobe 5 with the appropriate cable to a PC – either a Desk Top or a Notebook model.



The front of Ecoprobe 5 has a connector for the PC

- Switch Ecoprobe 5 **ON** and select *COMMUNICATION* from the Main menu. All subsequent commands are issued from the computer.
- Access the Main Menu (Figure 1) by starting the Communication Program.

Communication with Ecoprobe 5 is established, and a list of available localities is displayed in the right window. This status is indicated by the symbol **Connected** on the toolbar.

The left window on the PC screen is associated with the computer, the right window is associated with Ecoprobe 5.

If the symbol **Disconnected** is displayed, check if Ecoprobe 5 is in Communication mode. With the pointer located anywhere in the right window, click the **R** button to open a Sub Menu displaying an item **Refresh**. By selecting **Refresh** with the **L** button, communication with Ecoprobe 5 is established, and a list of available localities is displayed. The symbol **Connected** replaces the previously displayed **Disconnected**.

Note: For information on solving some of the problems that may occur when installing Ecoprobe Plus see Chapter 10 - Troubleshooting

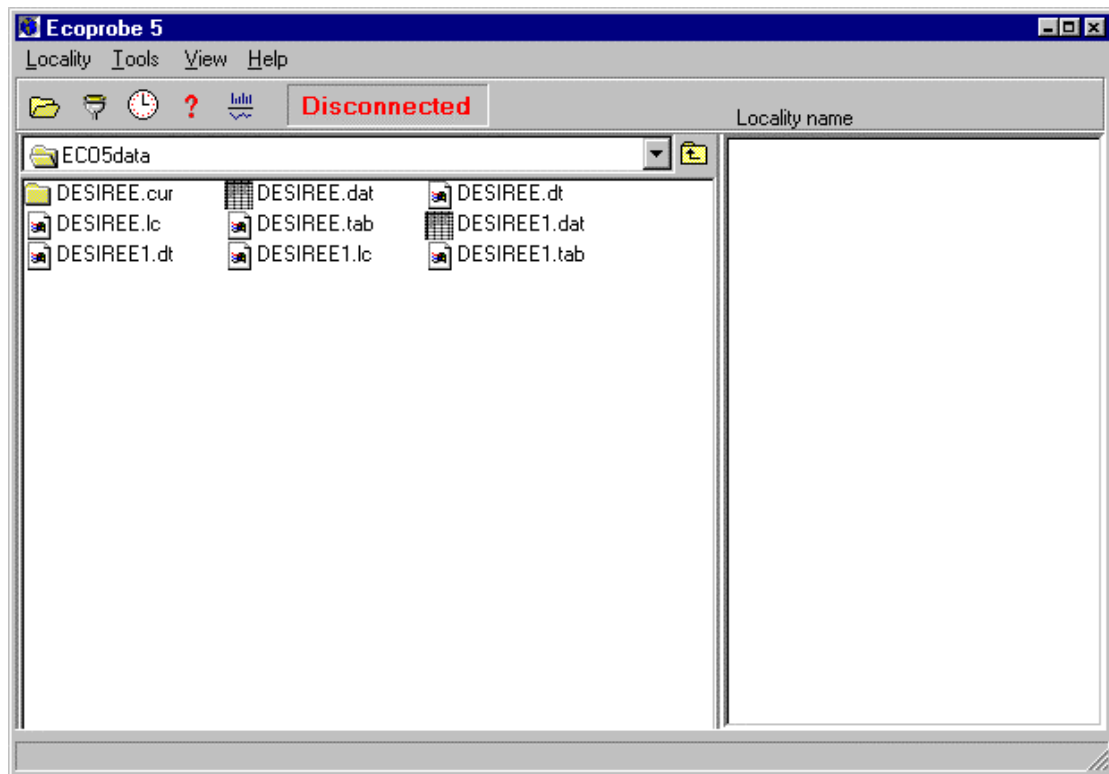


Figure1: Main Menu.

4. Main Menu

4.1 Menu bar

Locality Opens 3 options:

- *Load* Accesses a list of Localities. Select and open a Locality to display its *System Configuration File* (Figure 2).
- *Graph* First select a **.lc** extension file of a Locality, for example **Letaba.lc**, to display its locality grid and stations and to access the graphic part of the program (described in Chapter 8 – Graphic presentation procedure)
- *Exit* Exits the program

Tools Offers 2 options

- *Configuration* Offers different ports for communication between Ecoprobe 5 and the PC.
- *Send time* Adjusts the time in Ecoprobe 5 by transmitting the exact time from the PC.

View offers options to customize symbols of icons in the left window of the computer:

- ▶ *Icons* - default settings
- ▶ *Small icons* - obvious
- ▶ *List* - list of localities
- ▶ *Details* - more detailed list of localities

Help Help system

4.2 Button toolbar

All button functions are included in the menu bar (described above). Buttons speed up work with the program.



displays the System Configuration File of a selected locality.



offers different ports for communication between Ecoprobe 5 and PC.



adjusts the time in Ecoprobe 5 by transmitting the exact time from the PC.



help



graph button; all graphic displays are accessed by selecting a **xxx.lc** file and clicking on the graph button (described in Chapter 8).

5. System Configuration File

Each locality in the instrument Ecoprobe 5 contains a set of parameters (System Configuration File) that can be changed according to specific requirements of the locality either in the instrument or by means of Communication program Ecoprobe Plus.

5.1 View the System Configuration File:

- On the **Locality** menu, click **Load**. Select and open a Locality to display its System Configuration File (Figure 2).



- Offers the same function as **Load**.

5.2 Change System Configuration File parameters in Ecoprobe 5:

- Click on the selected locality in the right window associated with the Ecoprobe 5.
- On the short menu, click Edit. System Configuration File will be displayed (Figure 2). All changes can be saved in Ecoprobe 5.

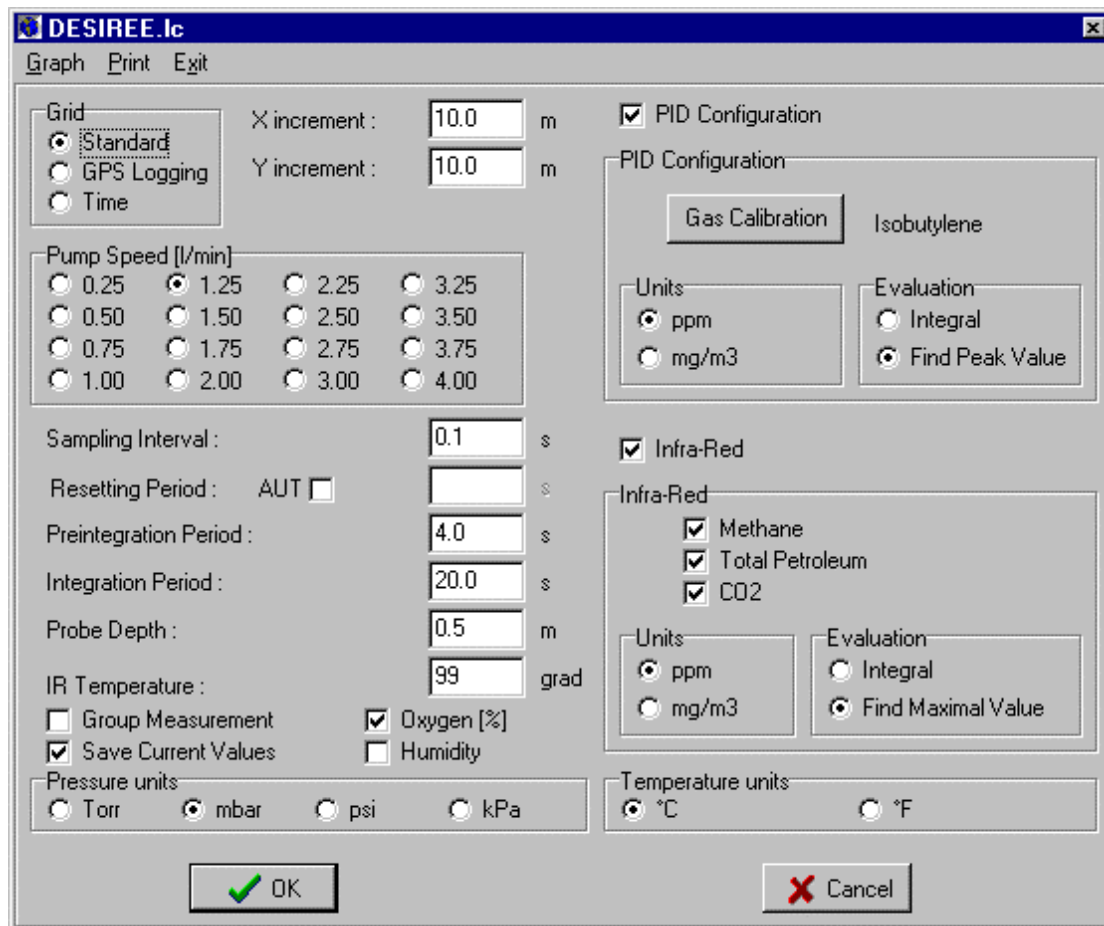



Figure 2: System Configuration File

6. Where to transfer data from Ecoprobe 5

6.1 Create a new folder for saving data

The left window on the PC screen is associated with the computer. Create a new folder for saving the data in the computer that are to be transferred from Ecoprobe 5, by clicking on the **R** button anywhere on the left window area. A short menu will pop up offering the item **New folder**.

6.2 Open an existing folder for saving data

An existing folder is opened in the left window by clicking on the  button and following the standard procedure for working with discs and folders.

7. Data transfer

There are two options to transfer data of a selected Locality from Ecoprobe 5 to the PC:

- Drag and drop the selected Locality from the right window to the left window.
- Use the **R** button to select a Locality in the right window. A Sub Menu with an item *Copy* is displayed. Click on *Copy* with the **L** button to initiate the transfer of data.

Either operation above, creates five file icons in the left window. To access a file, select it and click with the **R** button. A Sub Menu will appear, from which *View* is selected to open the file (Figure 2).

The five files from a Locality, for example '**DESIREE**', contain the following information:

DESIREE.dat - All data from this locality, but *without* the appropriate parameters or descriptions. This particular format is required by graphic programs such as Grapher, Surfer, Excel, etc.

DESIREE.tab - As above, but all data are labeled *with* the appropriate parameter or description. This particular format is for programs such as Excel for printing a data table.

DESIREE.cur - These data are in the 'Ecoprobe code', and are not accessible to the operator.

DESIREE.dt - As above.

DESIREE.lc - This file contains all the graphic information derived from the data. Use this file for graphic presentation by selecting it and clicking on the graph button (described below).

8. Graphic presentation procedure

The following graphic displays are accessed by selecting a **xxx.lc** file, for example **DESIREE.lc**, and clicking the **L** button on the graph button (Chapter 4.2).

8.1 Locality grid showing all the stations

Each station, represented by a dot, is positioned according to its x,y value, in different 'zones' (*lines*), parallel to the y-axis of the grid (Figure 3). The zone width, and consequently the number of zones (*lines*) may be changed by toggling the **+** or **-** button. This action is particularly useful for displaying points fixed by GPS, and also for stations that are not located on the 'standard' grid. Changing the zone width will either increase or decrease the number of dots (stations) per zone (*line*). All stations from one zone are related to one line for further graphic presentations that can be accessed by clicking on the OK button in the bar above the Locality grid display.

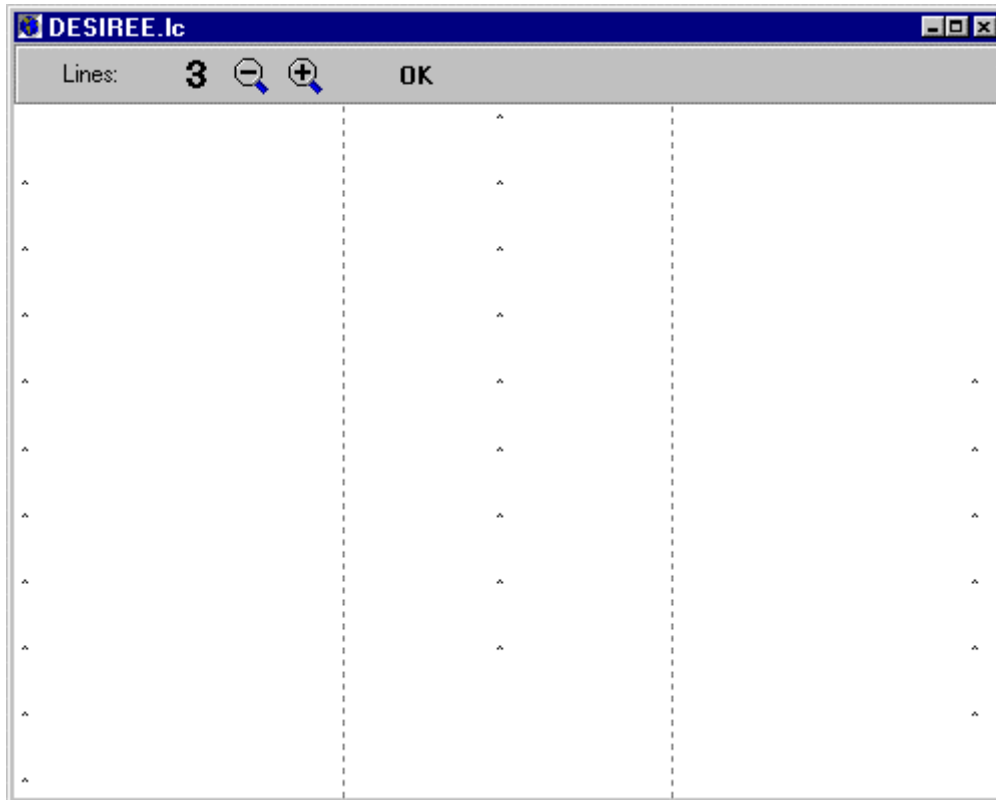


Figure 3: Locality grid

8.2 PID, Methane, Total Petroleum and CO₂ graphs (four-graph display)

The values of the above parameters, for a particular survey line, are displayed separately in four different graphs (Figure 4). For accessing these graphs, click the OK button in the bar above the Locality grid display (Figure 3).

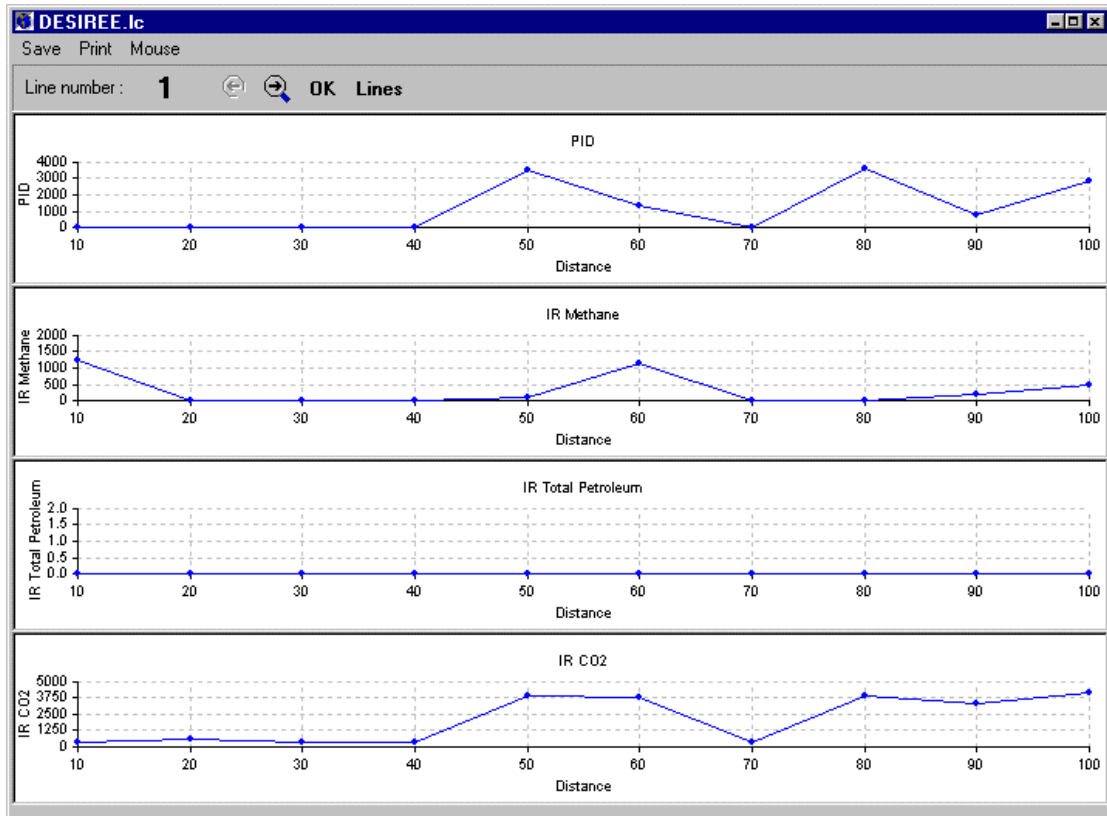


Figure 4: PID, Methane, Total Petroleum and CO₂ graphs

8.2.1 Toolbar symbols of the four-graph display:

| | |
|-------------|--|
| Line number | The number of a survey line which can be changed. |
| ← → | Navigates amongst the survey lines. |
| OK | Escapes to the Main Menu. |
| Lines | Displays graphically all lines of the Locality for a selected parameter (PID, Methane, IR TP, IR CO ₂) that can be changed by means of options in the bar above the display. |

8.2.2 Menu bar

| | |
|------|---|
| Save | Saves a selected graph from the menu: PID IR Methane IR Total Petroleum IR CO ₂ |
|------|---|

Print Prints a selected graph or the four-graph display.

Mouse Offers 3 options: **Other values**
Current graph
Edit titles

✓ **Other Values**

In the Mouse menu, select the *Other values* and **click the L button** on the appropriate dot (station) in the four-graph display. „Other parameters“ of a selected station will be displayed (O₂, absolute pressure, underpressure, external temperature, internal temperature, humidity, average and maximum measured values from PID and IR channels).

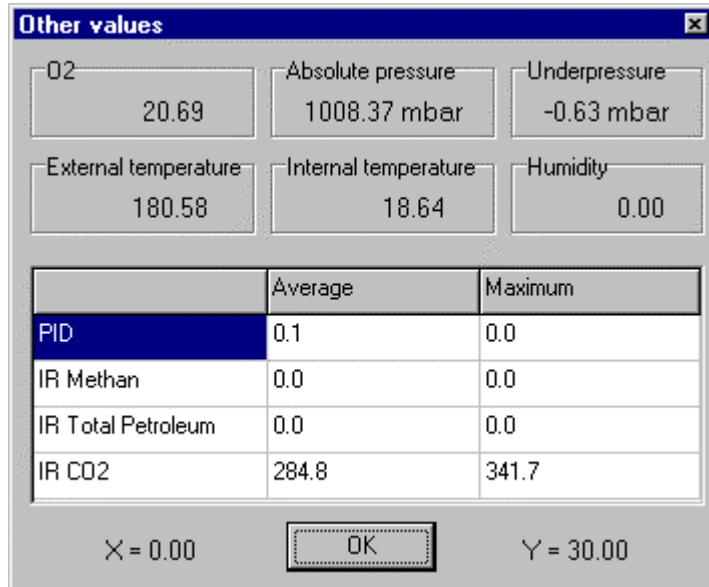


Figure 5: Other values

✓ **Current Samples**

In the Mouse menu, select *Current Samples* and **click the L button** on the appropriate dot (station) in the four-graph display. This option opens the concentration-time graphs displayed by Ecoprobe 5 while measuring a station (if option „Save current values“ was selected in the Configuration file of the locality).

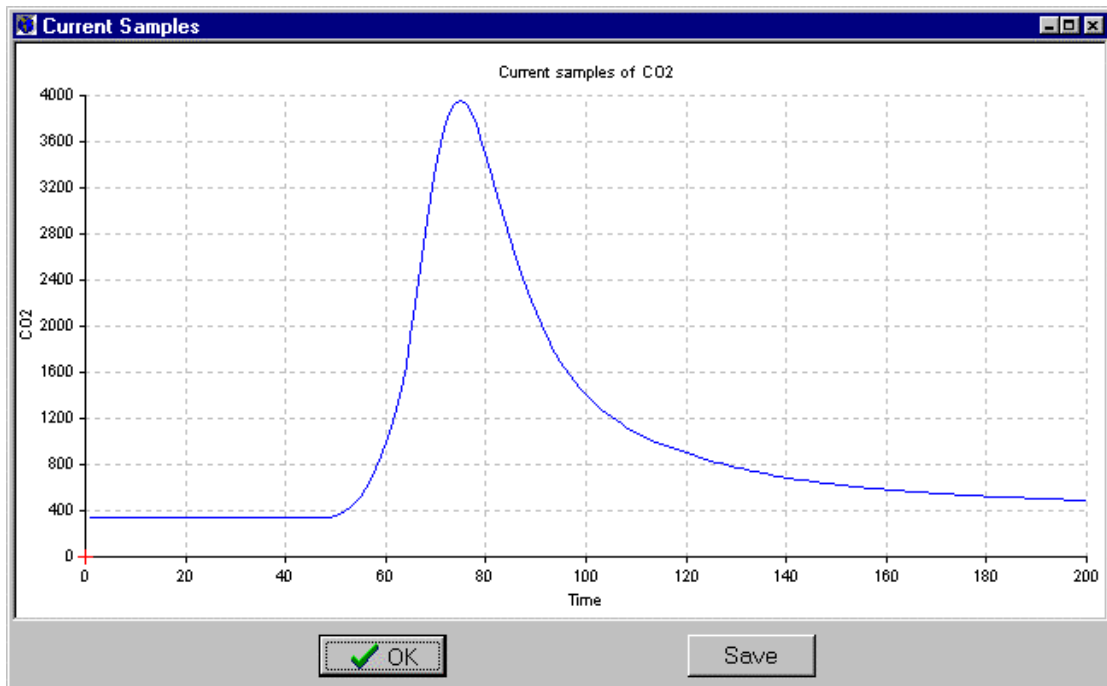


Figure 6: Current samples

✓ **Edit titles**

Select the option in the Mouse menu and **click the L button** on the appropriate graph area to write text (heading) for the graph and its axes.

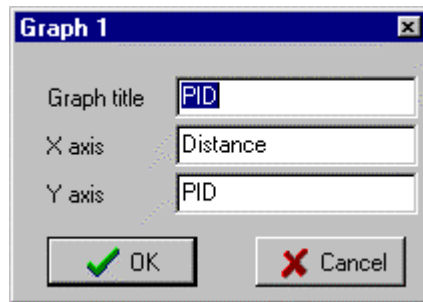


Figure 7: Edit titles

8.3 Enlarged display of PID, Methane, Total Petroleum and CO₂ graphs

Click the **R** button on a selected graph area for an enlarged display of a graph. Click the **R** button on an enlarged graph area to return to the four-graph display.

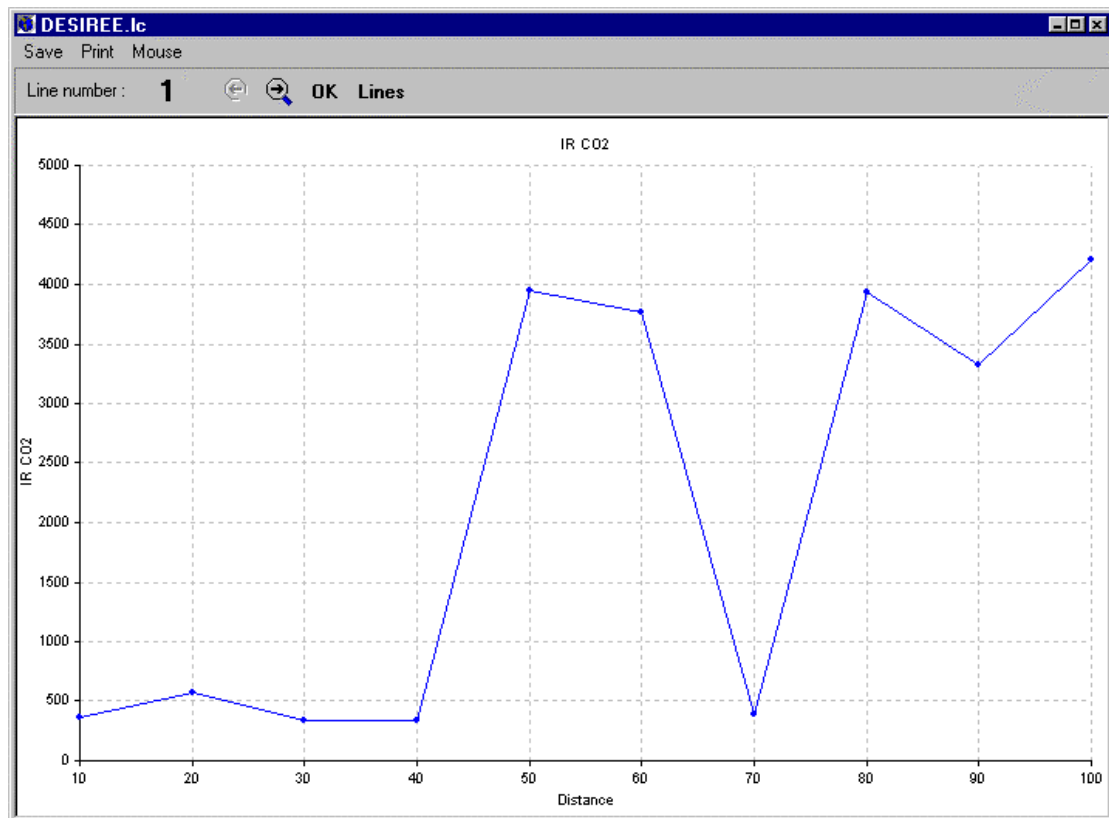
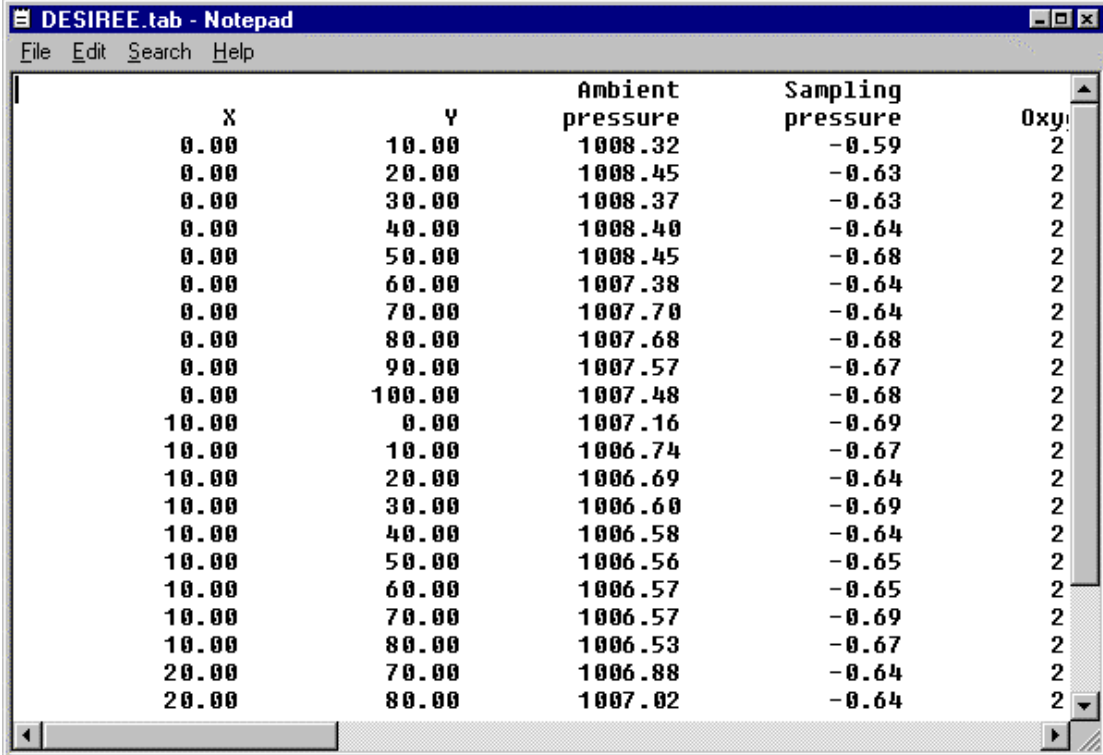


Figure 8: Enlarged CO₂ graph

9. Data table

- In the left window of the Main Menu click a file with extension *.tab
- Right-click on the selected file
- on the short menu, click View.

The data table is displayed. For printing, use other graphic programmes like Excel.



The screenshot shows a Notepad window titled "DESIREE.tab - Notepad". The window contains a data table with five columns: X, Y, Ambient pressure, Sampling pressure, and Oxy. The data is as follows:

| X | Y | Ambient pressure | Sampling pressure | Oxy |
|-------|--------|------------------|-------------------|-----|
| 0.00 | 10.00 | 1008.32 | -0.59 | 2 |
| 0.00 | 20.00 | 1008.45 | -0.63 | 2 |
| 0.00 | 30.00 | 1008.37 | -0.63 | 2 |
| 0.00 | 40.00 | 1008.40 | -0.64 | 2 |
| 0.00 | 50.00 | 1008.45 | -0.68 | 2 |
| 0.00 | 60.00 | 1007.38 | -0.64 | 2 |
| 0.00 | 70.00 | 1007.70 | -0.64 | 2 |
| 0.00 | 80.00 | 1007.68 | -0.68 | 2 |
| 0.00 | 90.00 | 1007.57 | -0.67 | 2 |
| 0.00 | 100.00 | 1007.48 | -0.68 | 2 |
| 10.00 | 0.00 | 1007.16 | -0.69 | 2 |
| 10.00 | 10.00 | 1006.74 | -0.67 | 2 |
| 10.00 | 20.00 | 1006.69 | -0.64 | 2 |
| 10.00 | 30.00 | 1006.60 | -0.69 | 2 |
| 10.00 | 40.00 | 1006.58 | -0.64 | 2 |
| 10.00 | 50.00 | 1006.56 | -0.65 | 2 |
| 10.00 | 60.00 | 1006.57 | -0.65 | 2 |
| 10.00 | 70.00 | 1006.57 | -0.69 | 2 |
| 10.00 | 80.00 | 1006.53 | -0.67 | 2 |
| 20.00 | 70.00 | 1006.88 | -0.64 | 2 |
| 20.00 | 80.00 | 1007.02 | -0.64 | 2 |

Figure 9: A part of a Data table

10. Troubleshooting

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Version 91006
SNR 200012