

EPSC 454 – Exploration and Environmental Geophysics

LAB REPORT GUIDELINES

You should think of your lab reports as instructions on how to do the experiment. One should be able to take your report into the field, replicate your entire experiment, and obtain similar results. This means details are important. What you think is obvious now might not be so obvious in the future, so include it in your report for completeness while attempting to keep your writing clear and concise. While there is no one formula for how to organize your lab report, below are some general guidelines for what to include. Some details of this would of course be changed/omitted/added depending on the specific experiment.

1. Title of lab, Date, Your Name

This is self-explanatory.

2. Abstract

All papers should have an abstract of some kind, and a lab report is no exception. Provide a short (1 paragraph) summary of the experiment, including the techniques used and results obtained.

3. Introduction

The introduction should give all of the necessary background to the reader. It should be as brief as you can make it. Make sure to clearly state the purpose of the lab and the theory for how you want to go about solving the problem. Mention any previous studies of the area and what they found.

4. Location/Setting

This is where you talk about where the experiment was done. You should include a map of the site and description of its condition (including any known geologic information and weather, if appropriate). Generally you should include the GPS coordinates of the site. State the date of data collection and the participants in the field work.

5. Experimental Method

The experiment section talks about the equipment you used (including model number and manufacturer) and how you used it. You go over the geometry of the survey and give rationale behind your choice of parameters (such as station spacing). Any equations or theory associated with the method can be given here, if not already explained in the introduction.

6. Results

If possible, provide a table or plots of the raw data. If there is too much data to list, you can combine data into sections and list it as filenames, for example. In addition to the raw data, show the processed results and analysis of the results. Whenever possible, give an error analysis.

7. Discussion

This is where you integrate your data with any other existing data or information and interpret it. Include results from previous studies, general geological observations of the site, and other inferences. What does it all mean, and how does it relate to your original purpose stated in the introduction?

8. Conclusion

Briefly sum it all up. For short labs, this section can be combined with the discussion.

9. References

If you used any external references make sure to cite them.

Please remember that these guidelines exist to give you some idea of what we're looking for in lab reports. Each situation may require this model to be tweaked to better fit it. Good luck!