

III - Geological Training

14) Who was your first geoscience related employer after finishing your highest degree? \_\_\_\_\_

15) Have you completed an industry graduate training course/programme?    Yes ☐    No ☐

16) If so, what was the duration of the course/programme, and what format did it take?    Duration: \_\_\_\_\_

Course/Programme Format: \_\_\_\_\_

17) Have you been on a seismic interpretation course (not including University training)?    Yes ☐    No ☐

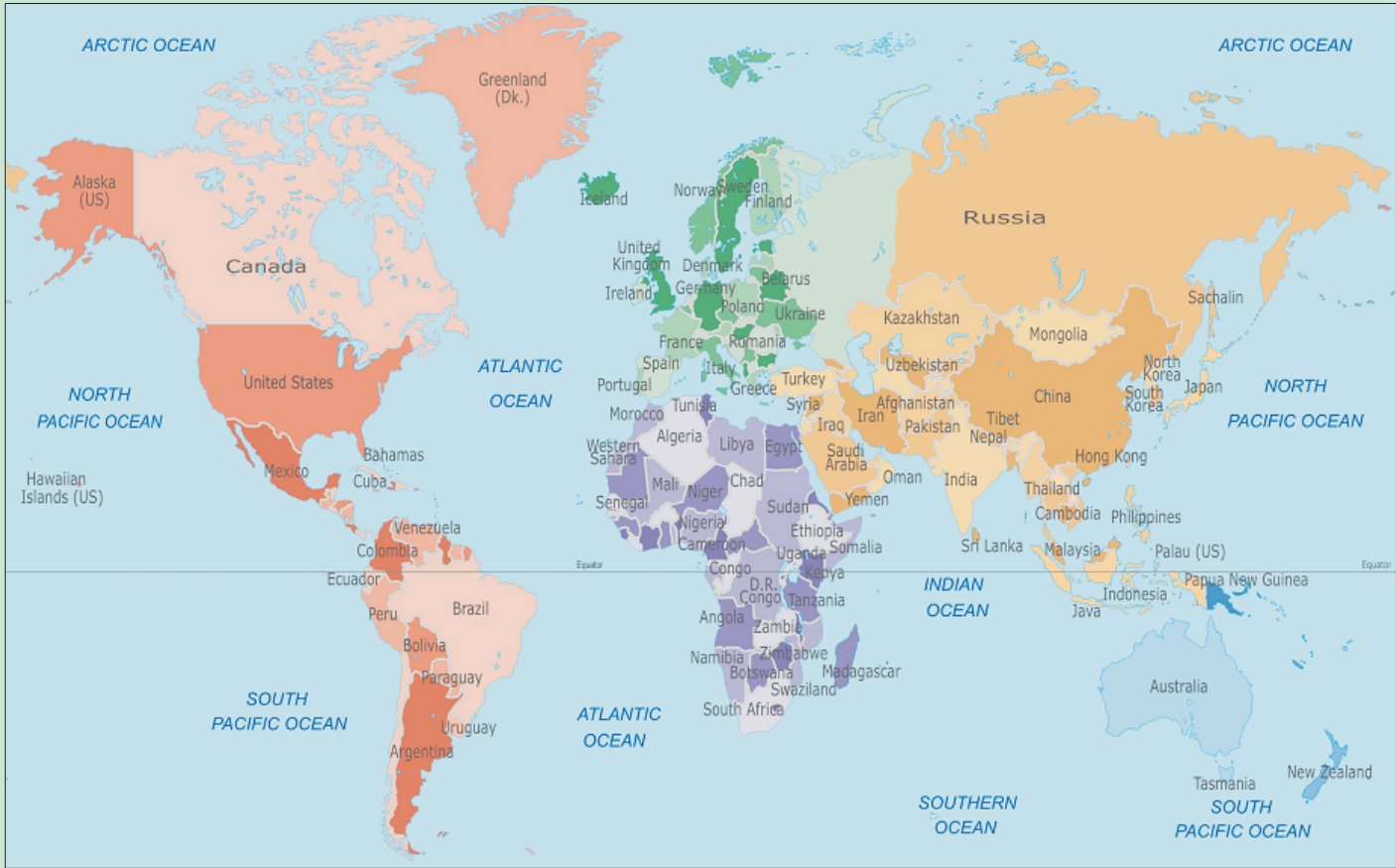
18) If so, what was the duration of the course? \_\_\_\_\_

19) Have you been on a structural geology course (not including University training)?    Yes ☐    No ☐

20) If so, what was the duration of the course? \_\_\_\_\_

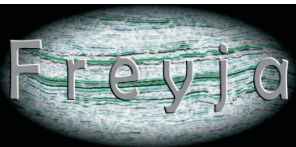
21) Please mark geographical locations where you have investigated the geology for more than 2 weeks in your entire geoscience career.

(This should include everything; Ph.D. thesis, projects, scientific studies, fieldwork, etc... )



Acknowledgements

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The Virtual Seismic Atlas (VSA) is thanked for use of the seismic image.



# Freyja

## Uncertainty Analysis of Geological Interpretations



### Background

Freyja is a research project designed to quantify the uncertainty in the interpretation of data used to create geological models. This survey investigates the differences in how people interpret and understand geological data (such as seismic images). Completion of the survey will allow the investigators to quantify the differences between peoples' interpretations and to use this knowledge to devise workflows to minimise the effects of this uncertainty. To maximise the benefits of the survey a large sample size is needed; you are part of a skilled population that works with geological data and your participation is greatly appreciated. Freyja is part of Euan Macrae's Ph.D. work, if you would like more information about Euan's work contact Euan.Macrae@strath.ac.uk or visit [www.gla.ac.uk/geologicaluncertainty](http://www.gla.ac.uk/geologicaluncertainty)

### Instructions

This exercise must be completed individually.

- i) Complete the questionnaire (which continues over all 4 pages).
- ii) Interpret the seismic image shown on the centre pages.
- iii) Answer the final three questions under the seismic image.

The entire exercise is expected to take 15 - 25 minutes.

### Questionnaire

Unless otherwise stated please tick the circles to indicate your answers.

1) Gender: Male ☐ Female ☐

2) Age: < 21 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61+ ☐

#### I - Education and Experience

3) What degrees have you completed?    None ☐    Bachelors ☐    Masters ☐    PhD ☐    (Tick all that apply.)

4) What subject / topic area(s) were they in?

Bachelors: \_\_\_\_\_

Masters: \_\_\_\_\_

PhD: \_\_\_\_\_

5) Number of years of relevant experience (those relating to geoscience) since attaining your highest degree?

\_\_\_\_\_ years

6) Which of the below best describes where you have worked in the past 24 months? (You may tick more than one circle.)

Academia ☐    Consultancy ☐    Service Company ☐

Other \_\_\_\_\_ ☐

Oil Company:

Super-major ☐    Major ☐    National ☐    Medium-small Independent ☐

And in what area? Exploration ☐    Production ☐    Other \_\_\_\_\_

7) Which of the below best describes your background most accurately? (You may tick more than one circle.)

Academia ☐    Consultancy ☐    Service Company ☐

Other \_\_\_\_\_ ☐

Oil Company:

Super-major ☐    Major ☐    National ☐    Medium-small Independent ☐

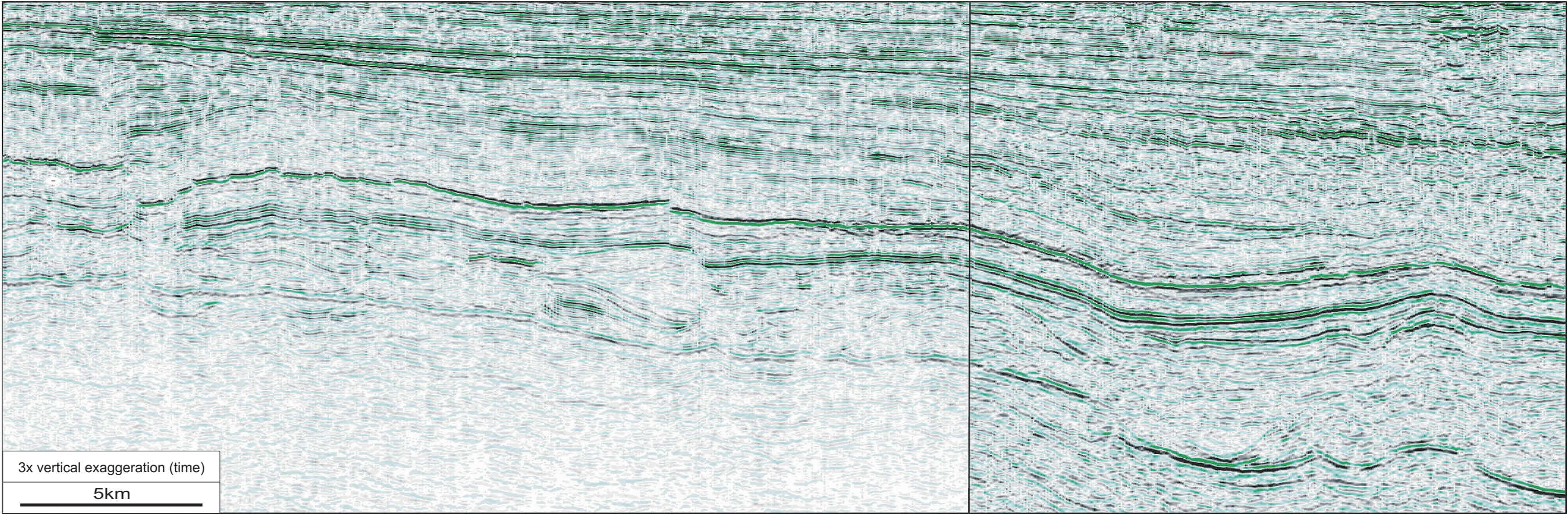
And in what area? Exploration ☐    Production ☐    Other \_\_\_\_\_

Your participation with Freyja is greatly appreciated - Thank you!

Please return completed questionnaires to:

**Euan Macrae**  
Department of Civil Engineering  
Graham Hills Building  
University of Strathclyde  
Glasgow, G1 1XP  
Scotland, UK

Please interpret the whole seismic image.



Finally, please answer the 3 questions below with regards to only the seismic interpretation exercise.

i) How long did you spend interpreting the seismic image? \_\_\_\_\_ minutes

ii) Would you have liked more time? Yes ☐ No ☐

iii) What is your confidence; in your interpretation?

Very Confident ☐ Confident ☐ Satisfied ☐ Doubtful ☐ Totally unsure ☐

in the linkage of faults?

Very Confident ☐ Confident ☐ Satisfied ☐ Doubtful ☐ Totally unsure ☐

II - Geological Experience

8) What best describes your experience in Structural Geology?

Specialist ☐ Good Working Knowledge ☐ Basic Knowledge ☐ No Knowledge ☐

9) What best describes your experience in Seismic Interpretation?

Specialist ☐ Good Working Knowledge ☐ Basic Knowledge ☐ No Knowledge ☐

10) How often do you interpret or use seismic images?

Daily ☐ Weekly ☐ Monthly ☐ 6-Monthly ☐ Yearly ☐ Almost Never ☐

In the following questions (Q11-13) please use rankings to indicate your answers.

Please note; you do not need to rank areas / geological settings where you have never worked - only rank options in which you actually have some experience.

Equal ranks are allowed.

In all questions, 1 = most active / worked there most, and lower rankings (2, 3, 4, etc...) = less active / worked there less.

11) Rank the following areas of geoscience to show which areas you have been most active in over the last 24 months.

Basin Modelling ☐ Geochemistry ☐ Geophysics ☐ Management ☐ Reservoir Engineering ☐  
Reservoir Geology ☐ Sedimentology (carbonates) ☐ Sedimentology (clastic) ☐ Seismic Interpretation ☐  
Stratigraphy ☐ Structural Geology ☐ Training ☐ Other? ☐

12) Rank the following geological settings by duration to show where you have worked in the last 24 months.

Compressional tectonics ☐ Extensional tectonics ☐ Inversion tectonics ☐ Salt tectonics ☐  
Shale tectonics ☐ Strike-slip tectonics ☐ Other? ☐

13) Rank the following geological settings by duration to show where you have worked in your entire geoscience career.

Compressional tectonics ☐ Extensional tectonics ☐ Inversion tectonics ☐ Salt tectonics ☐  
Shale tectonics ☐ Strike-slip tectonics ☐ Other? ☐