

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

Workshop Information

Please note that:

- participation in this workshop is completely anonymous
- participation is voluntary
- all exercises must be completed individually

Please answer all questions carefully.

This workshop is expected to take less than 90 minutes.

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

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 _____

II - Geological Experience

8) What best describes your experience in **Structural Geology**?

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

8) 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 ☐

Please read the following instructions carefully:

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? _____

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 ☐

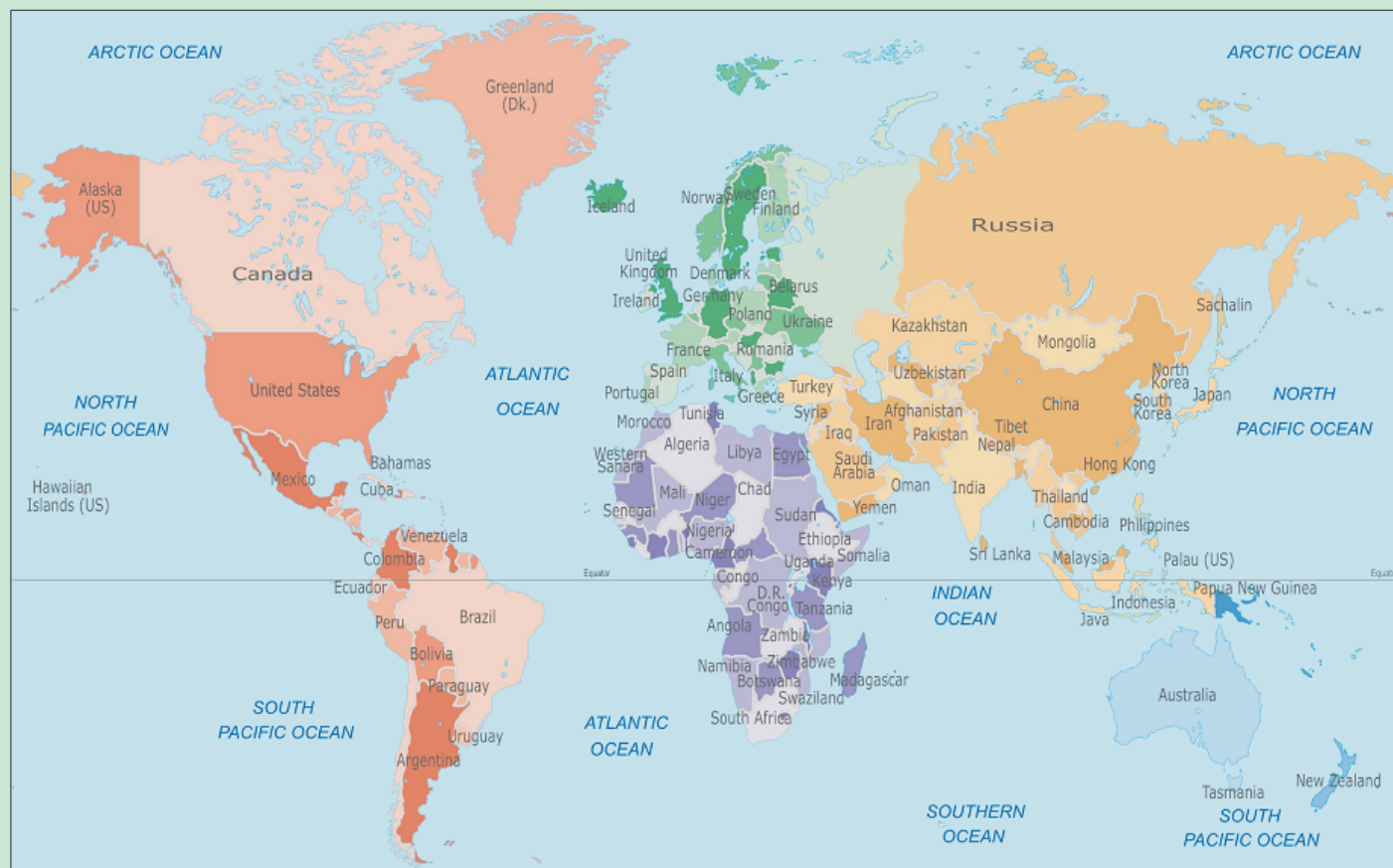
18) If so, what was the duration of the course? _____

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...)



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