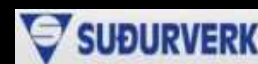


NORÐFJARÐARGÖNG

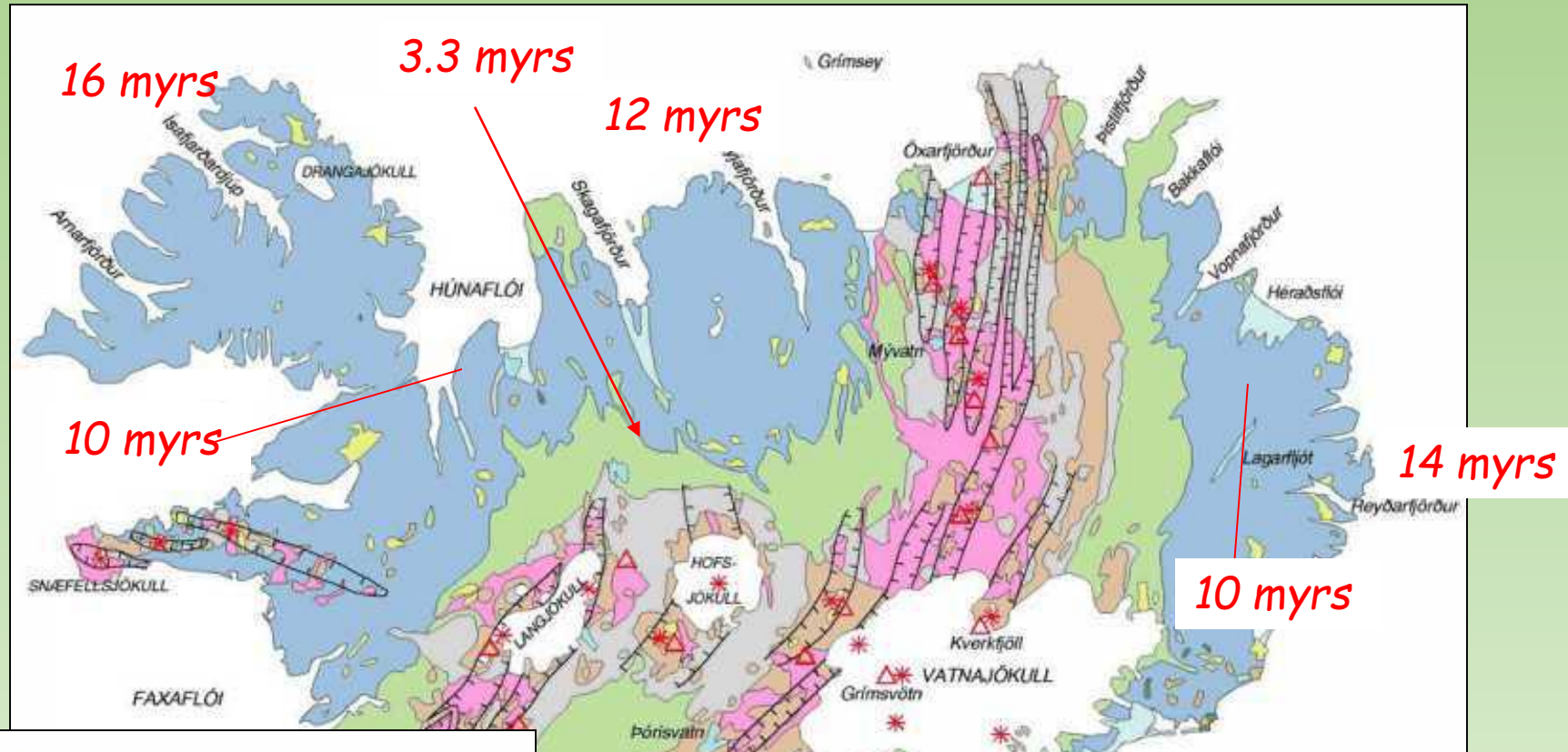
NORDFJORD ROAD TUNNEL – 7.9 KM

Data and information
with complements from

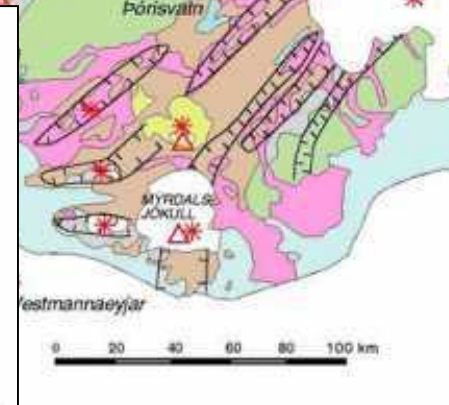
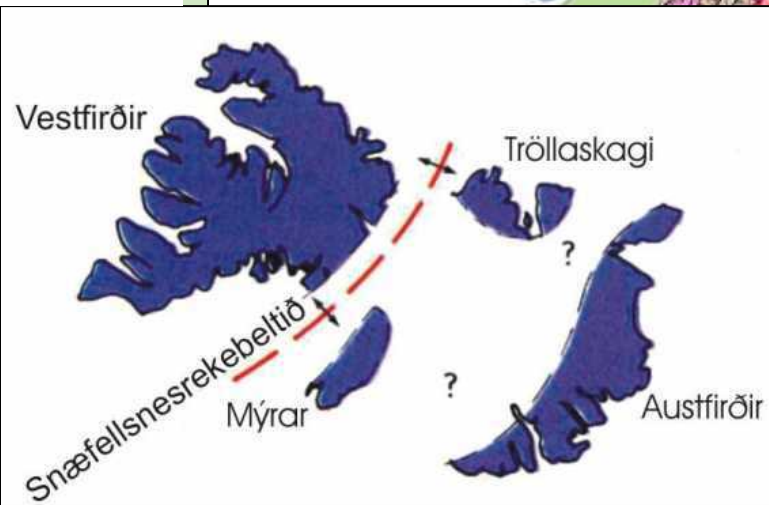


Introduction for the G.P.L.Walker
Seminar, Breiðdalsvík 26.08.2014
By Hnit Consulting Engineers

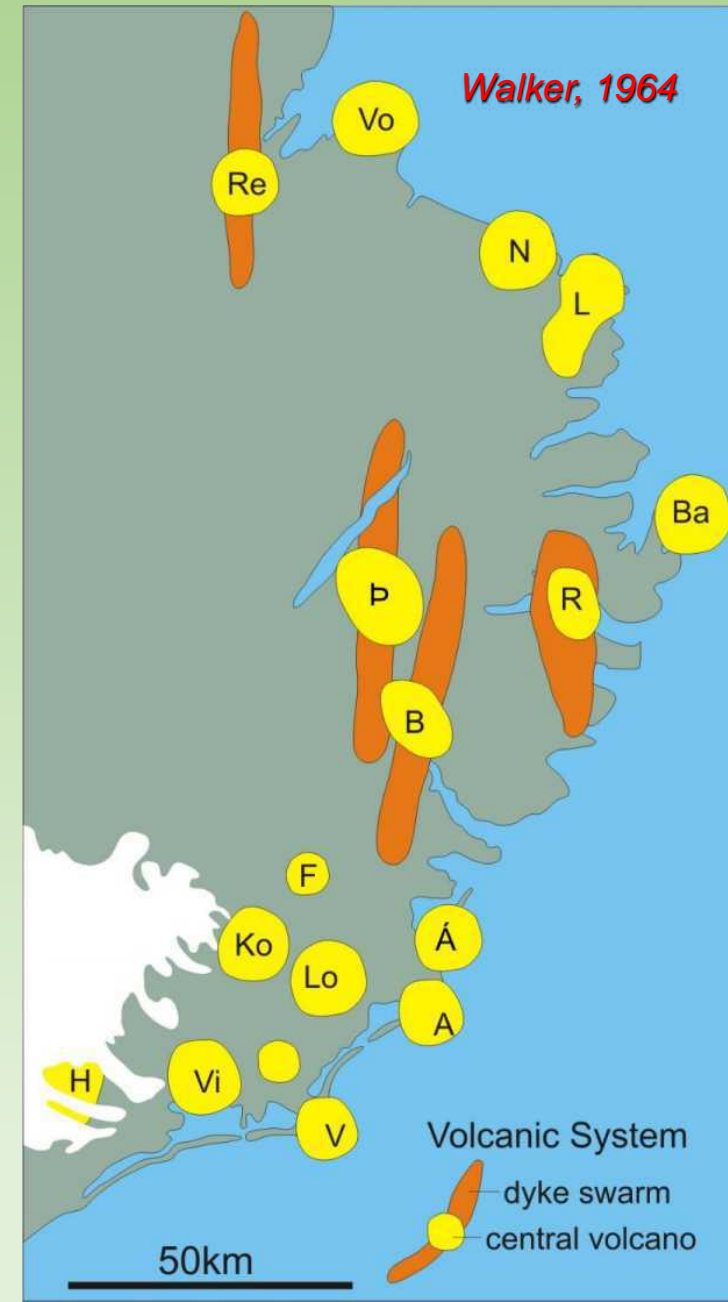
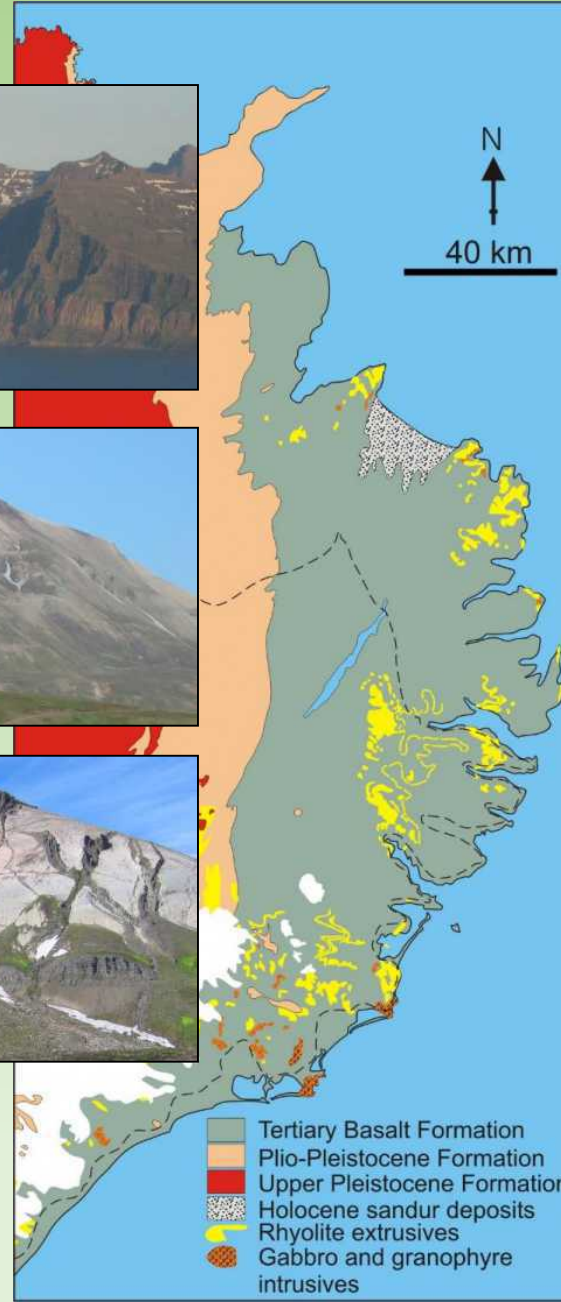
Tertiary Formation (16 - 3.1 Ma)



Iceland 16-8 Ma



Tertier Volcanic Systems

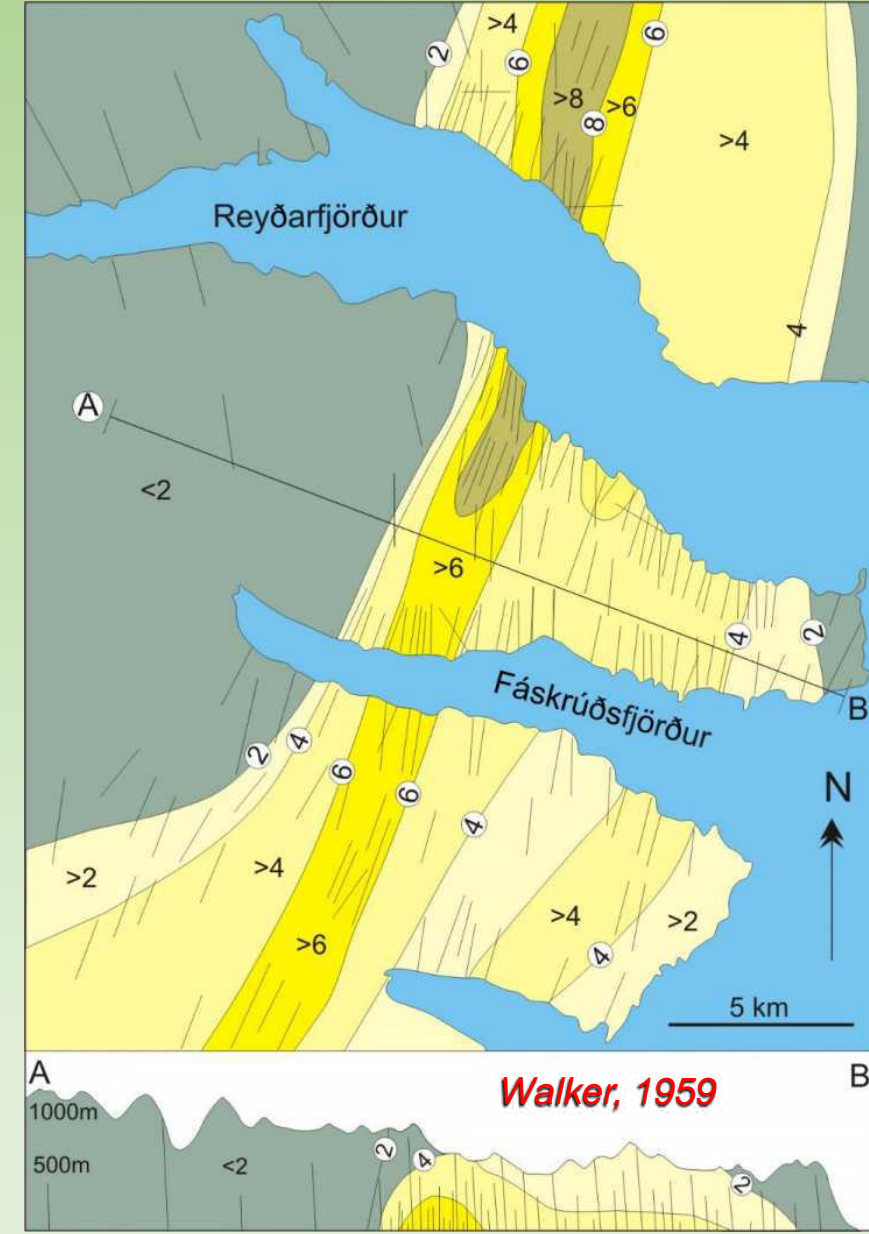
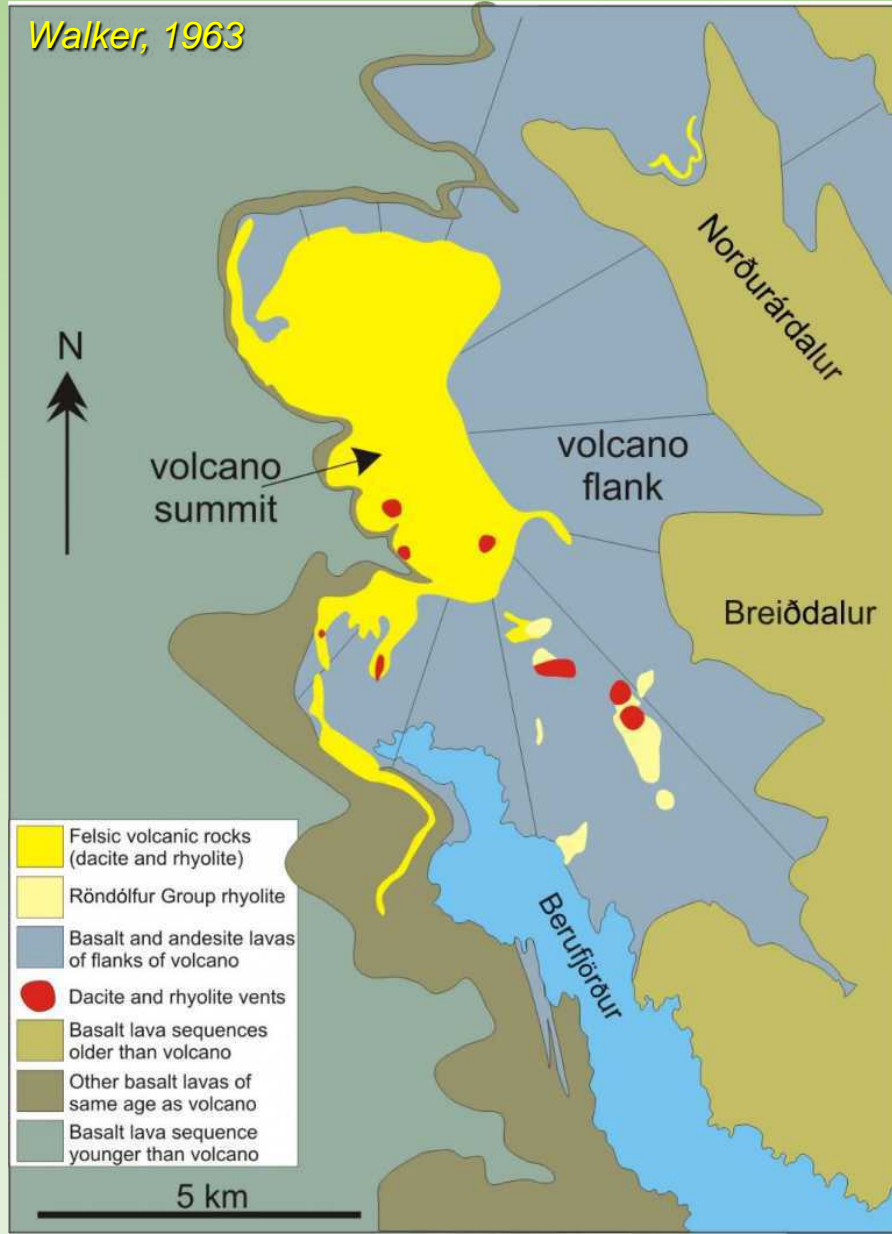


Plateau basalt lava sequences common

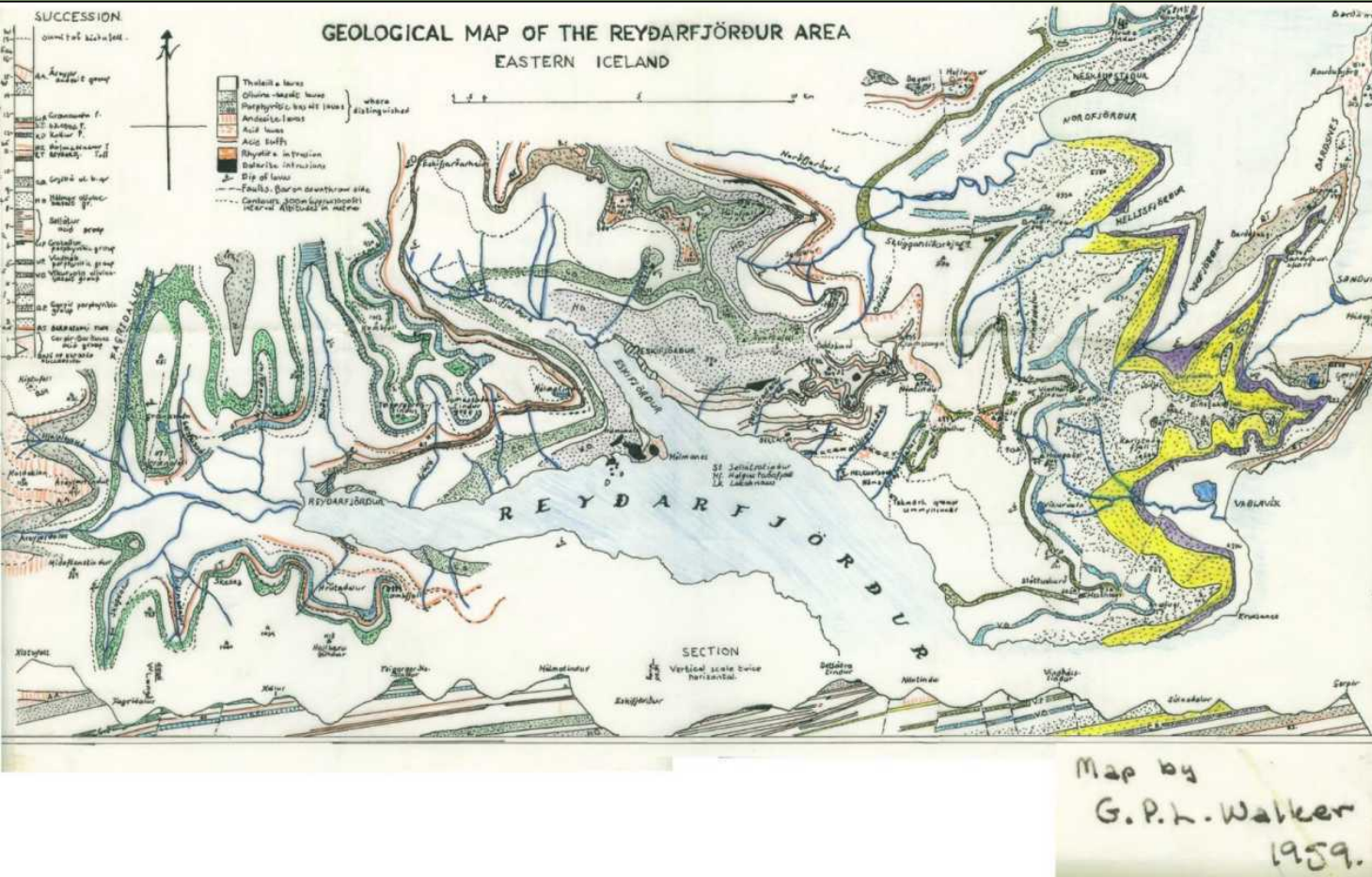
Central volcanoes and dyke swarms
= volcanic systems

Tertier Volcanic Systems

central volcanoes & dyke swarms

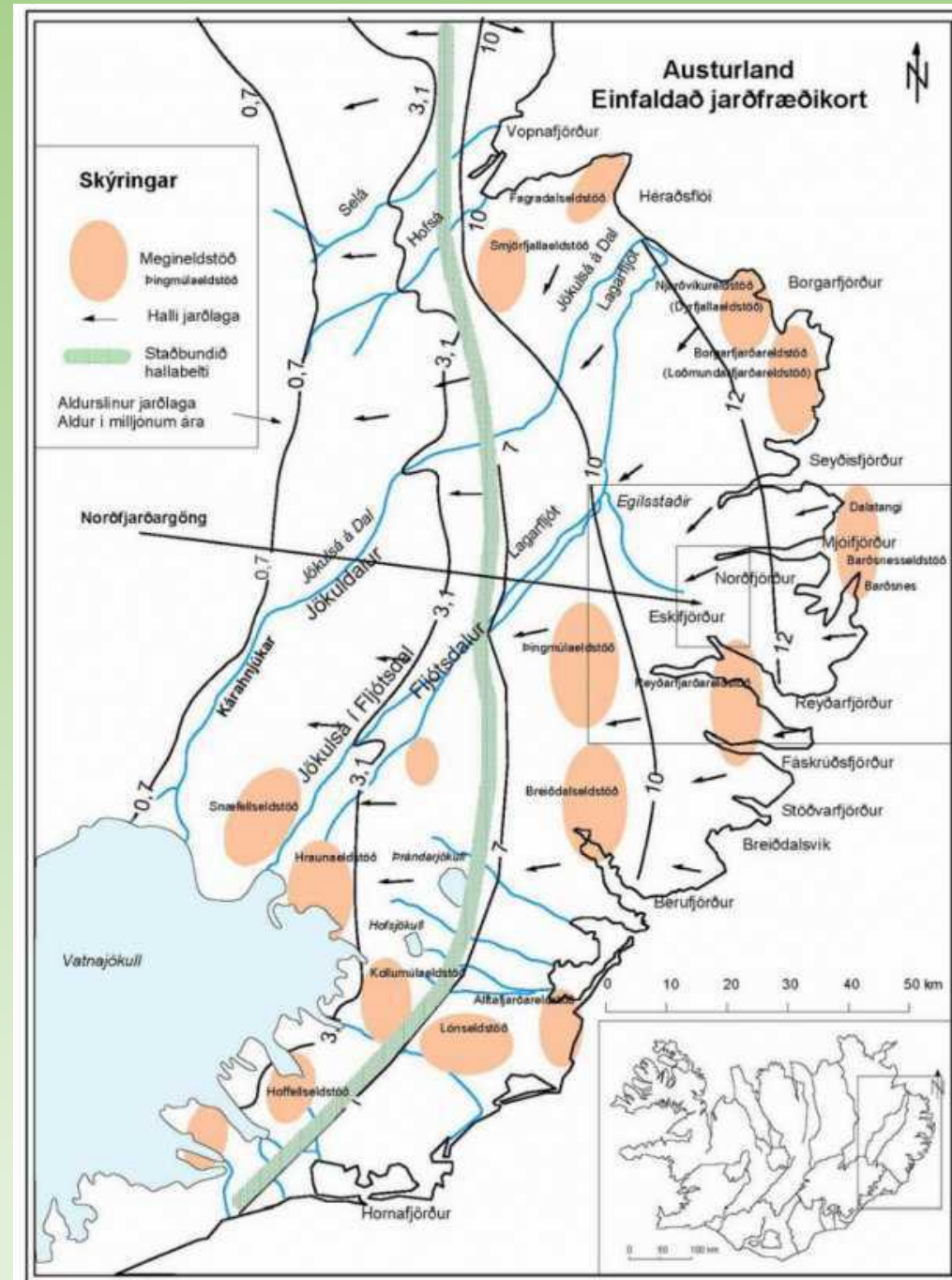


Geology of Reyðarfjörður-Eskifjörður-Norðfjörður



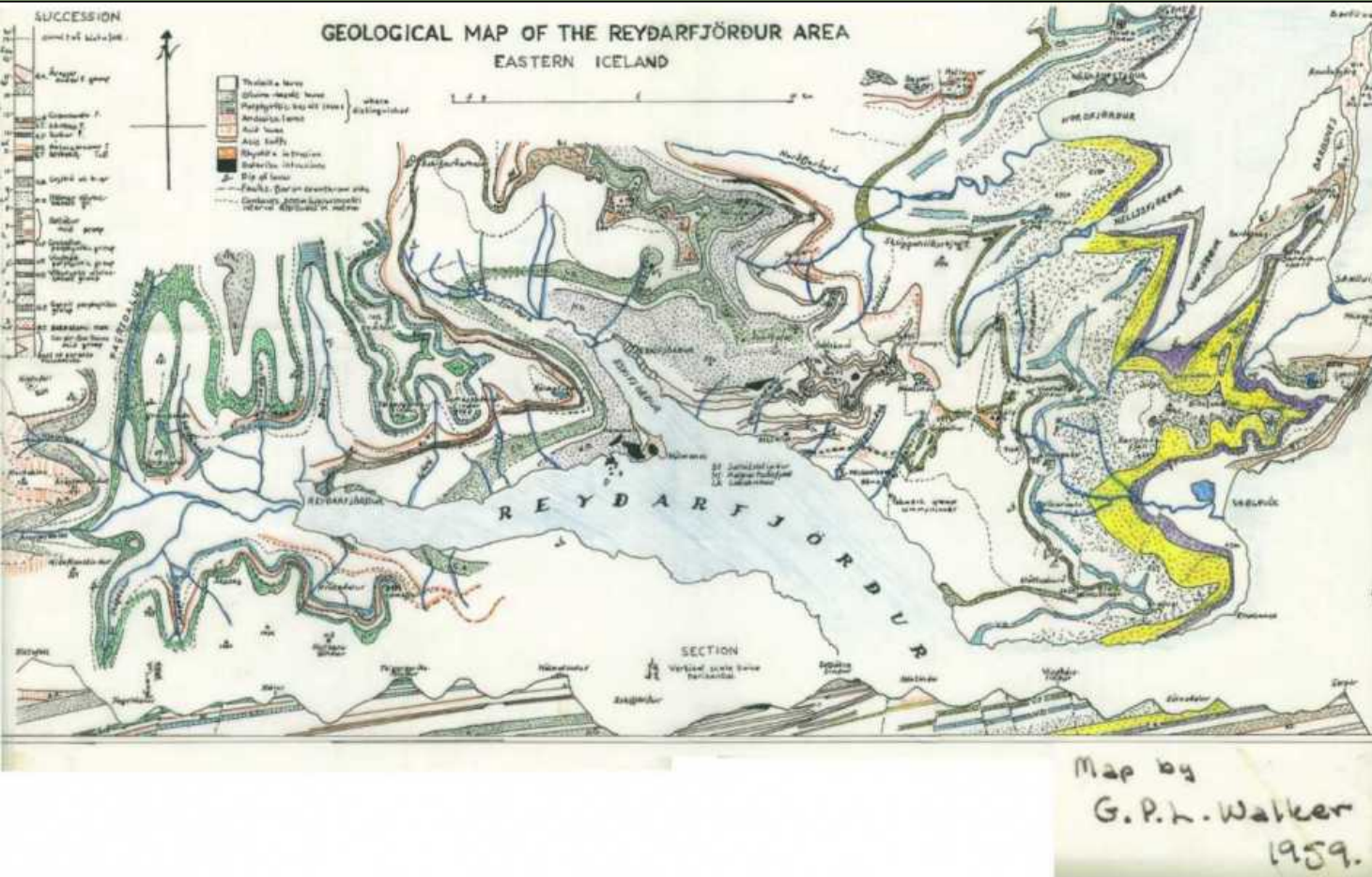
Plateau basalt: phyric vs plag phyric vs ol phyric lava sequences

Central volcanoes: rhyolite, andesite, basalt lavas and tuffs

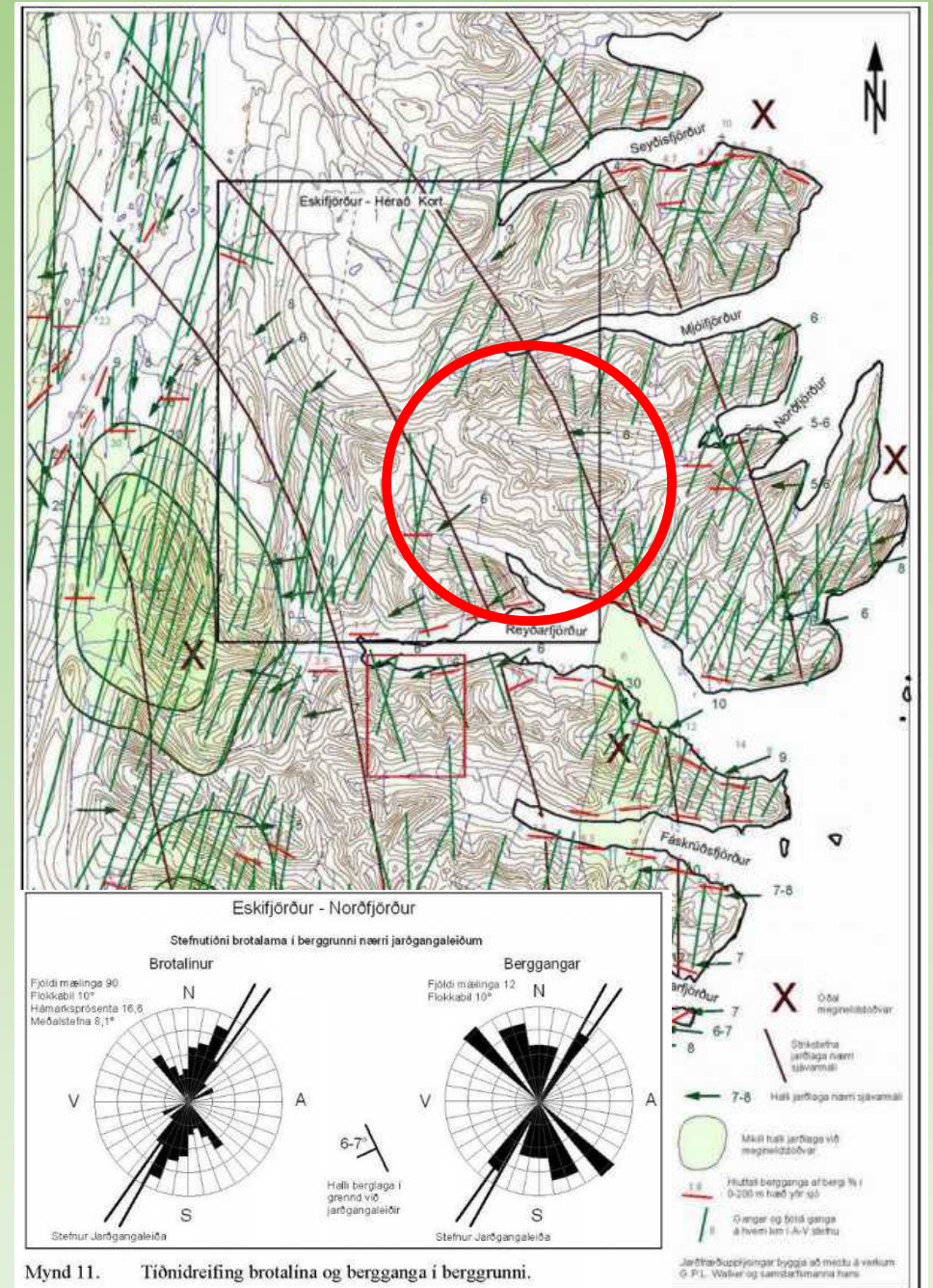


Mynd 1. Austurland. Helstu drættir í jarðfræði.

Geology of Reyðarfjörður-Eskifjörður-Norðfjörður



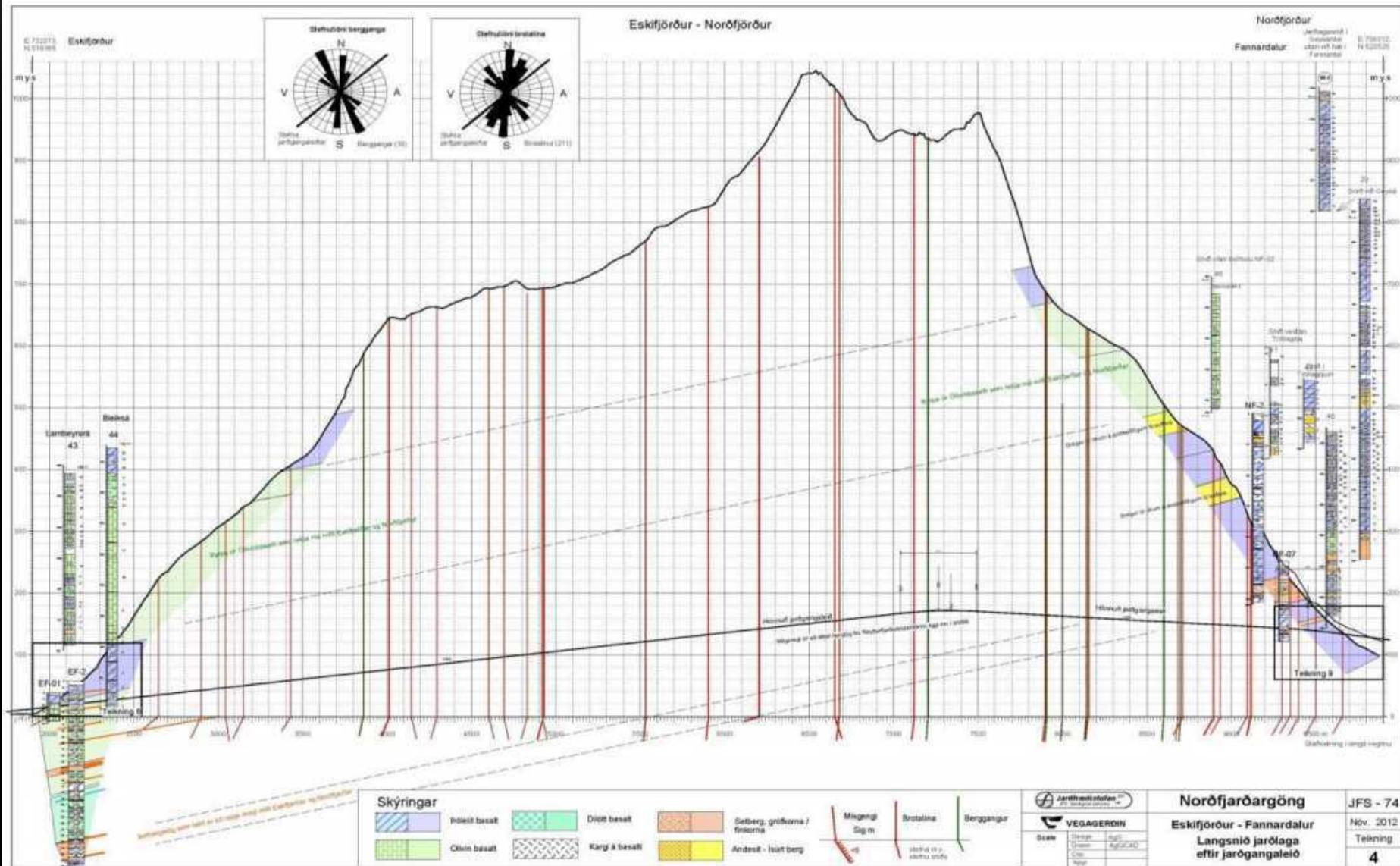
Relatively few dykes in the area of Norðfjarðargöng



Mynd 11. Tíðnidreifing brotalína og bergganga í berggrunni.

Mynd 2. Austfirðir. Berggangar og jarðlagahalli.

OVERVIEW - GEOLOGY





Distribution of
rock glaciers in
East Iceland

Mynd 7. Dreifing þykkra urðarbingja á Austfjörðum.

Placement of the entrance for the road tunnel



Rock glacier in Fannardalur

Sediment formations such as rock glaciers and alluvial fans cause problems and can affect placement of road tunnels.



Alluvial fan in Fannardalur



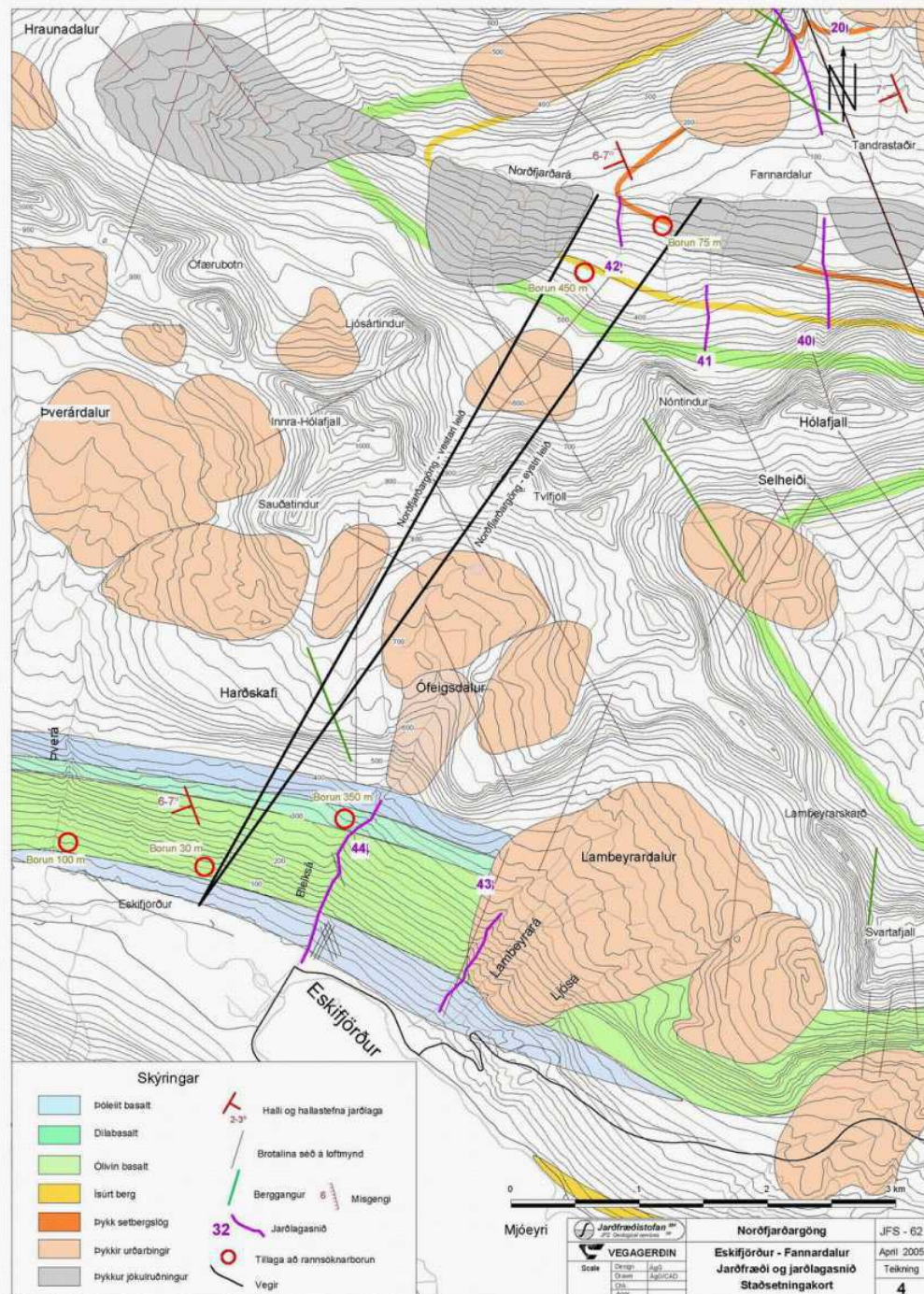
Placement of the entrance for the road tunnel

Initially the favoured site for tunnel entrance on Eskifjörður side. Then they built a “new church”!

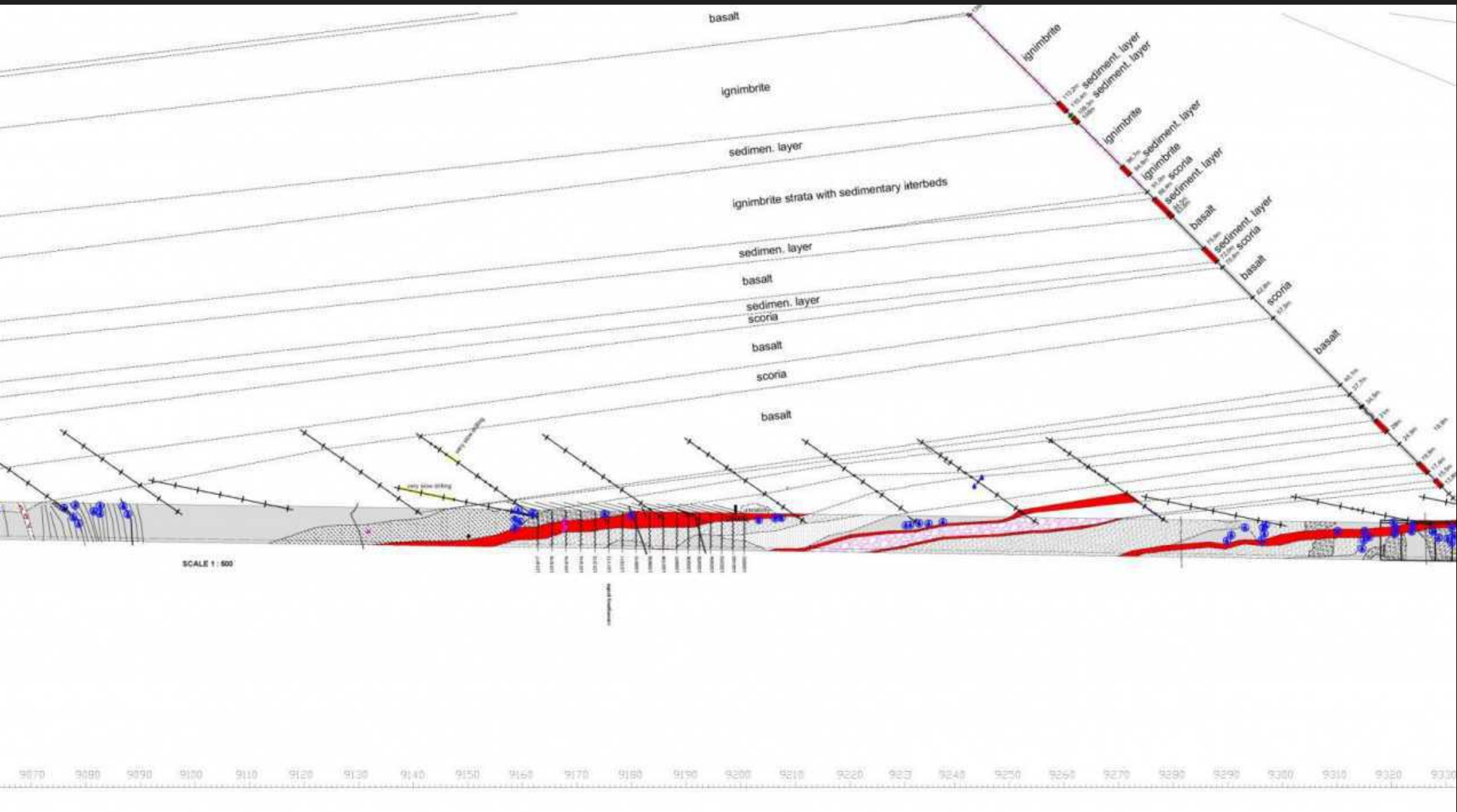


So, in the end they placed it hereabouts!

Road tunnel placement



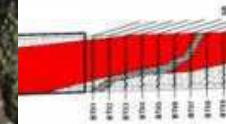
FANNARDALUR – SHORT PROBE HOLES AND ONE LONG CORE DRILLHOLE



ESKIFJÖRÐUR – STEEL LATTICE GIRDERS (STÁLBOGAR)



Ch: 2973



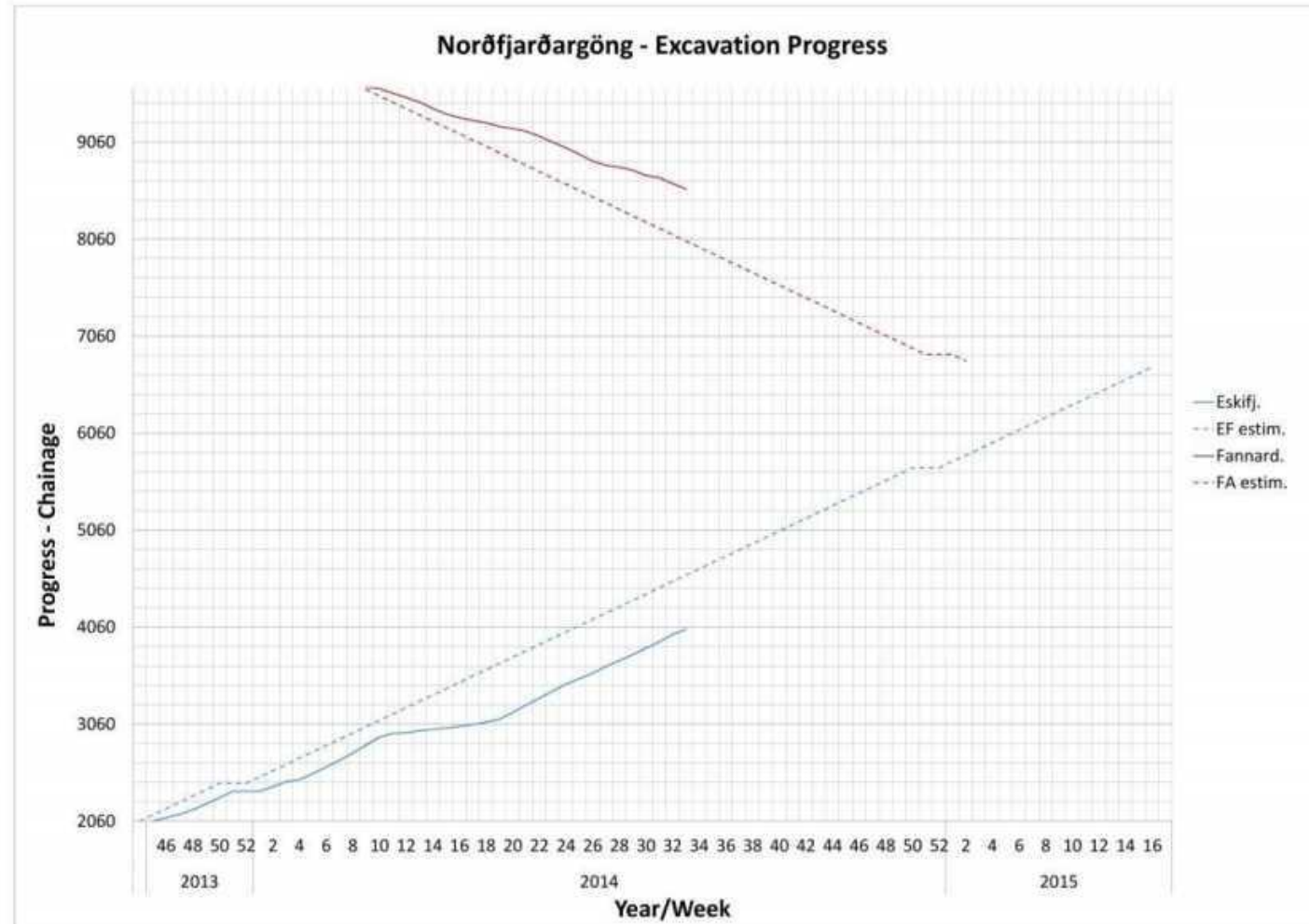
ESKIFJÖRÐUR – LATTICE GIRDERS AND SPILING BOLTS



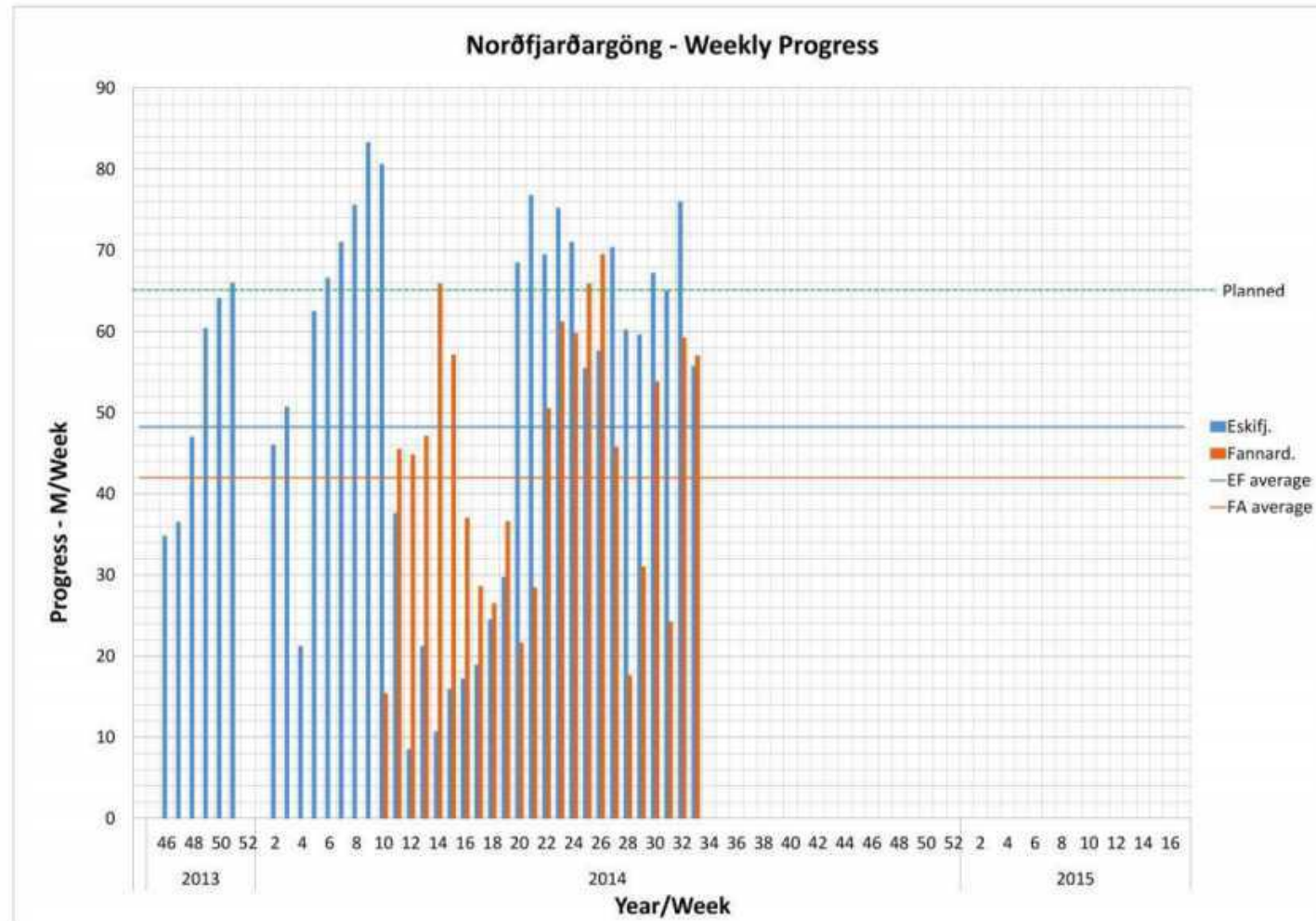
ESKIFJÖRÐUR – LATTICE GIRDERS (HRUN)

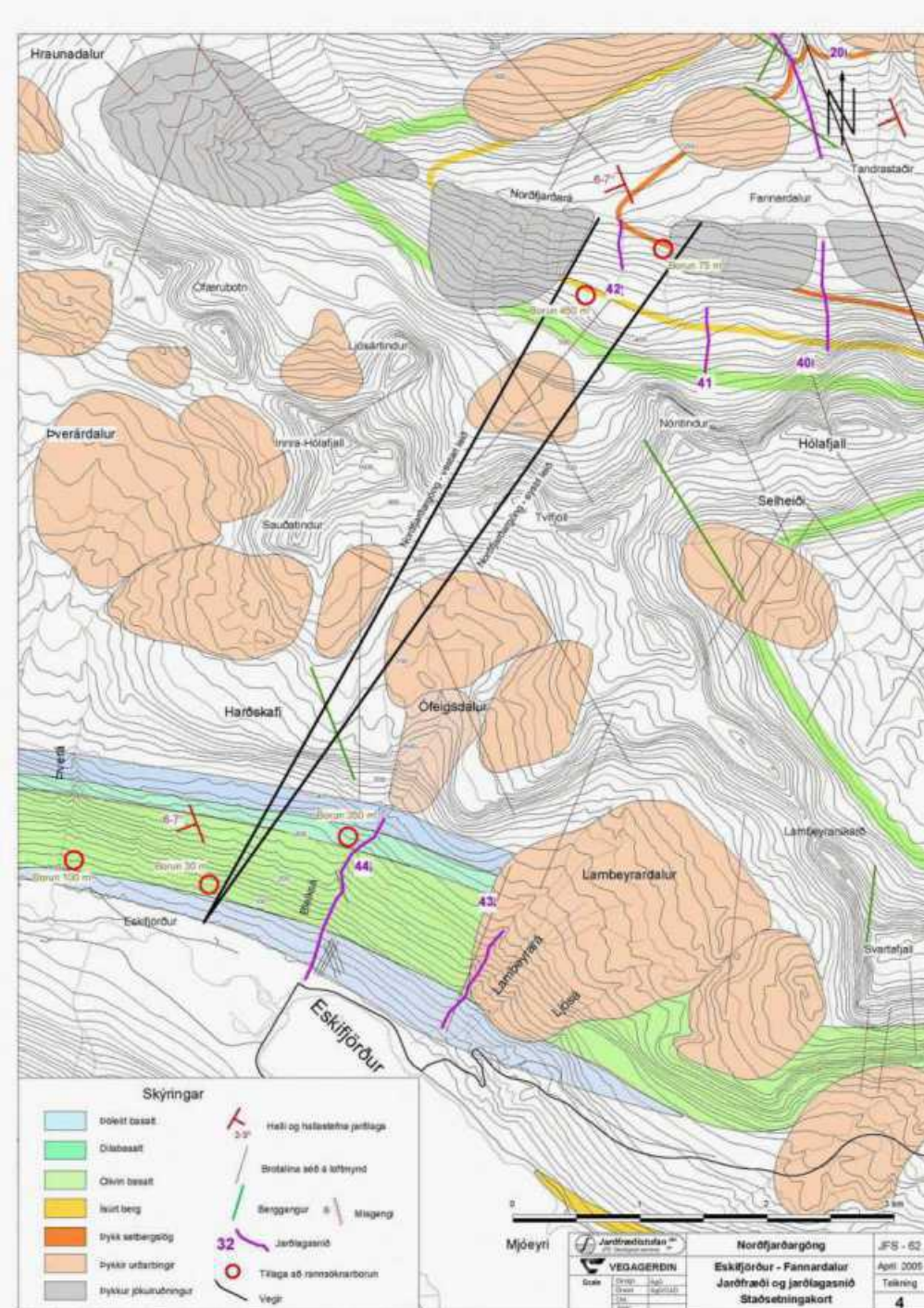


PROGRESS VS CONTRACTORS ESTIMATE



PROGRESS VS CONTRACTORS PLANS

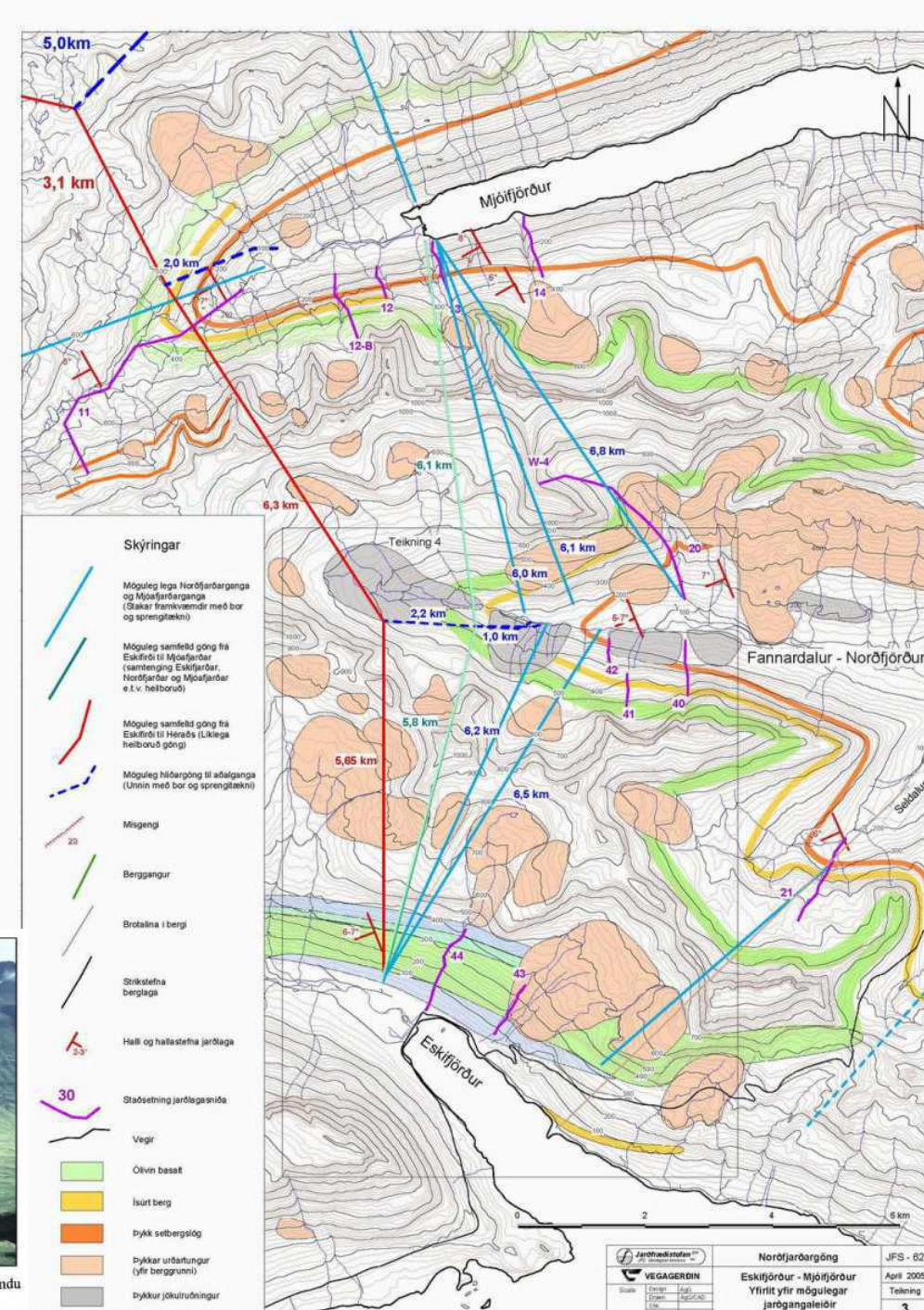


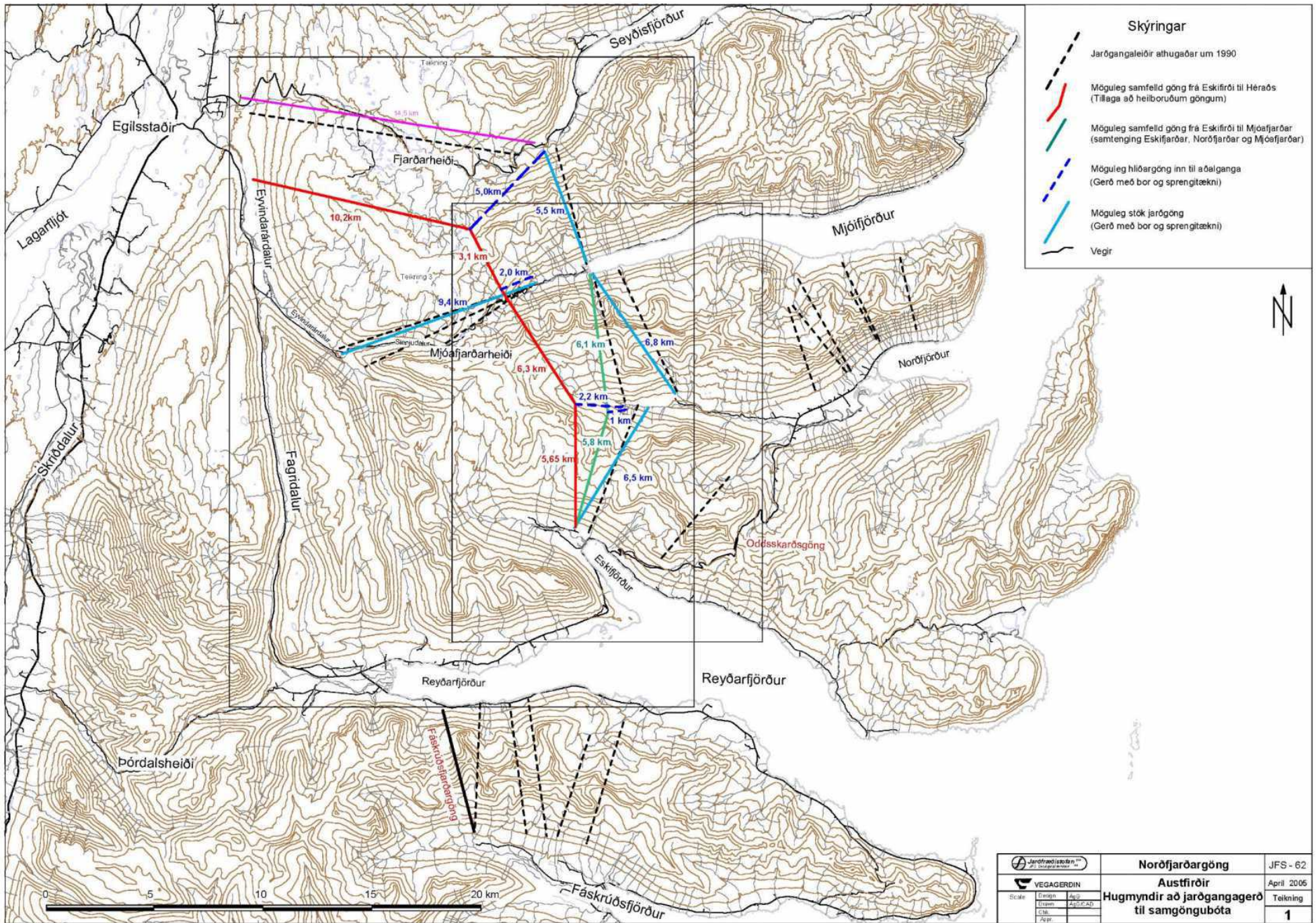


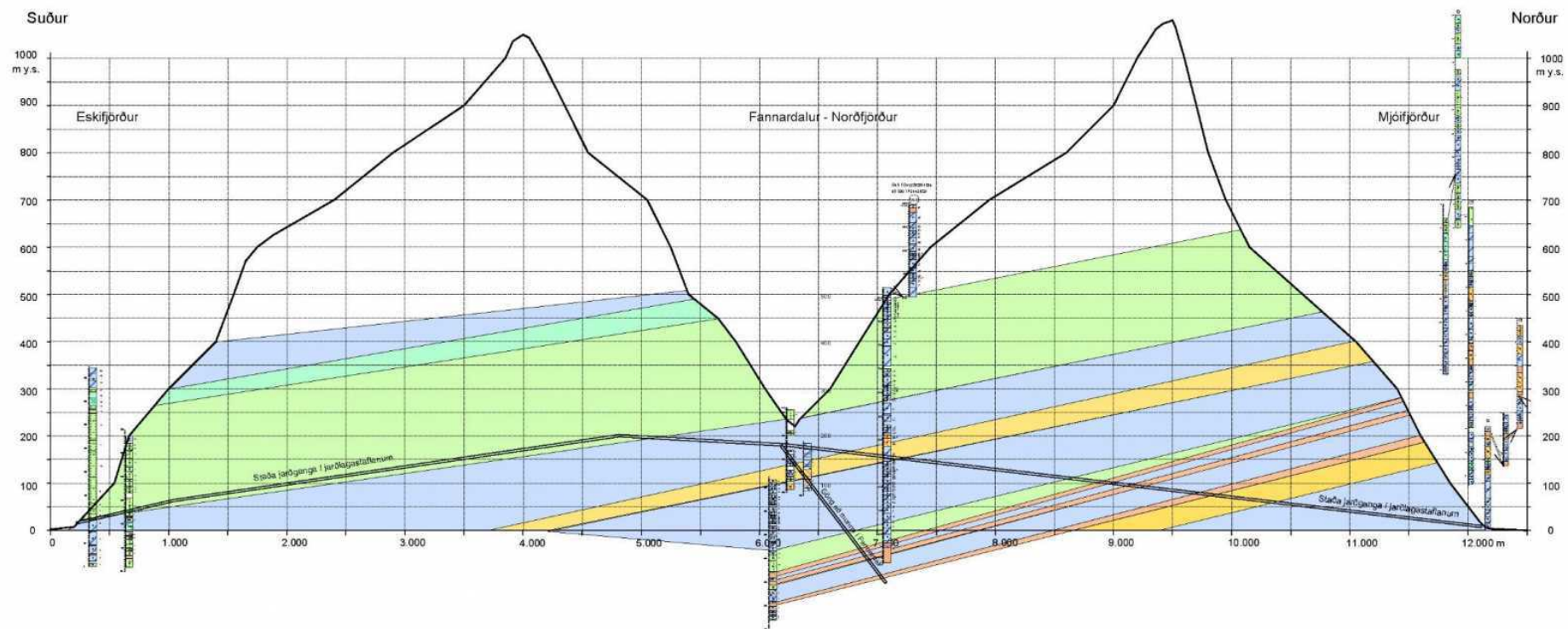
Drill more, more and more!!



Mynd 17. Botn Mjóafjarðar, horfi til suðurs. Gangamunnar frá Norðfirði myndu líklega opnast nærri miðri mynd.







Skýringar

	póleitt basalt		Setberg, finkorna set
	Olivín basalt		Setberg, grófkorna set
	Dillótt basalt		Andesit - ísúrt berg
	Kargi á basalti		



VEGAGERDIN

Scale	Design	Appr
	Drawn	Appr/CAD
	Chk.	
	Appr.	

Norðfjarðargöng

Eskifjörður - Mjóifjörður
Með hlíðargöng í Fannardal
Langsnið jarðlaga

JFS - 61

April 2005

Teikning

8

Seyðisfjörður - Hérað

Mælt með jarðfræðilegum athugunum árið 2014

>5°

5°

3-4°

Borhola A

Geological section

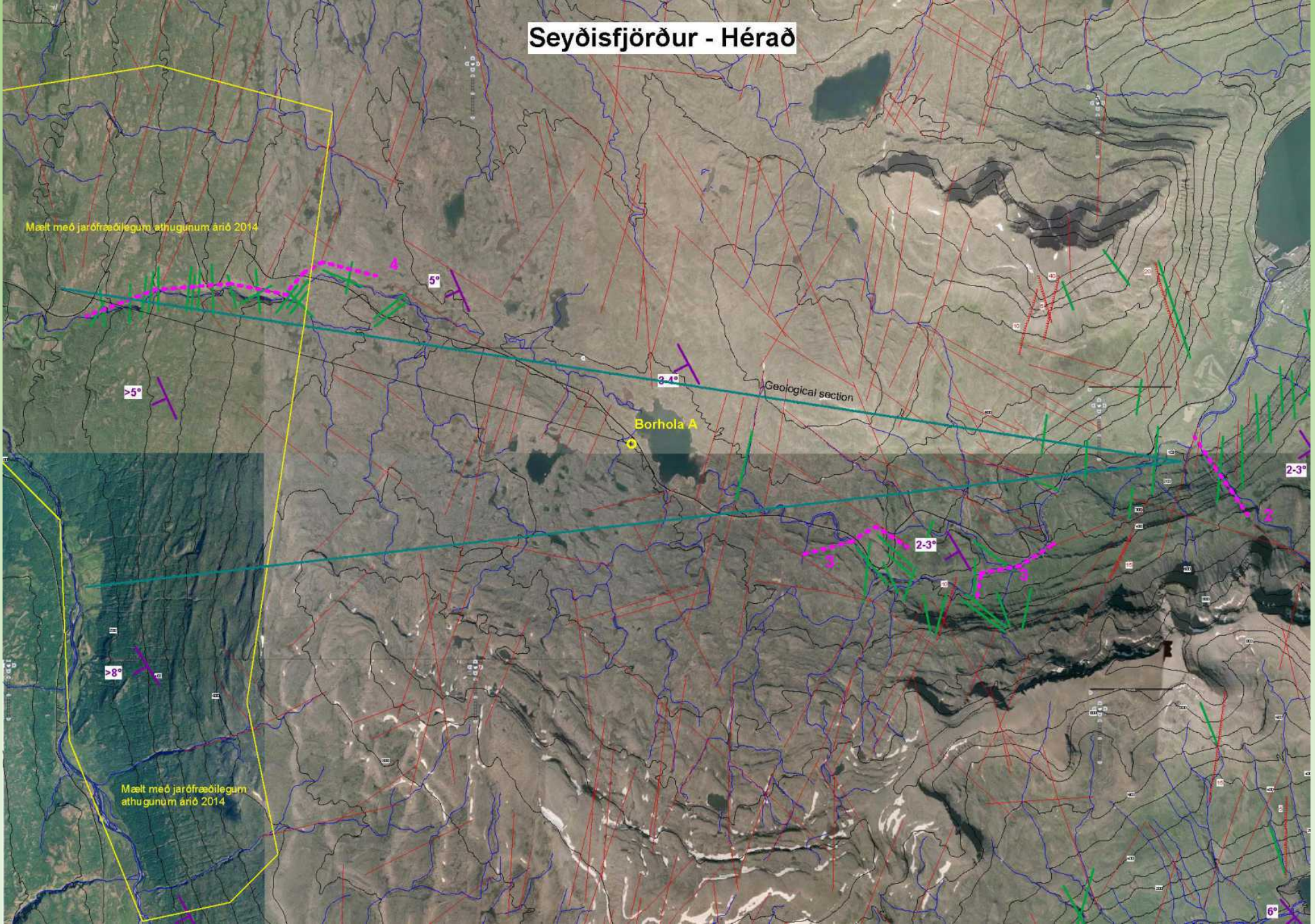
2-3°

2-3°

>8°

Mælt með jarðfræðilegum athugunum árið 2014

6°



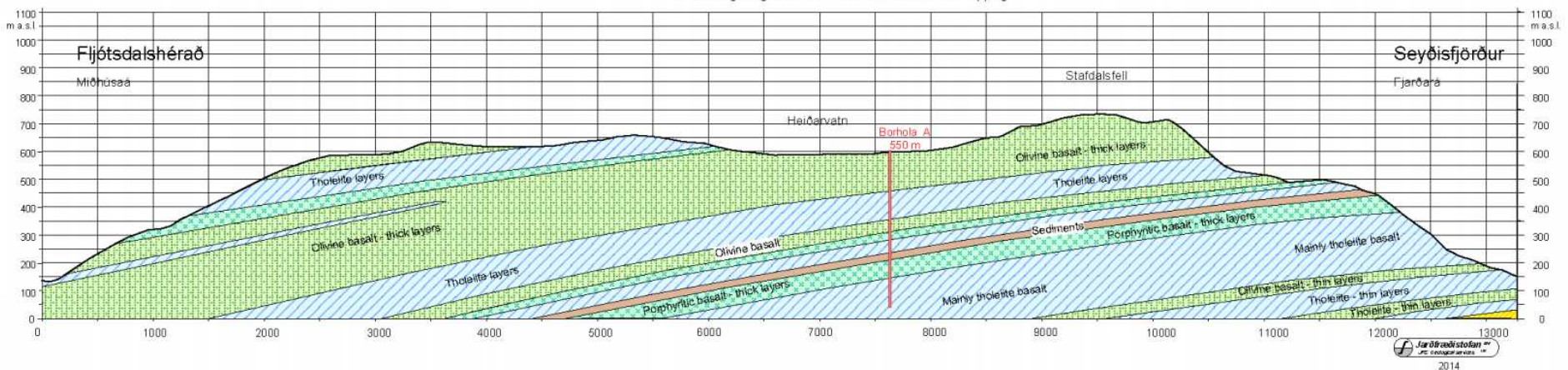
Seyðisfjörður - Hérað

Mælt með jarðfræðilegum stuðnum árið 2014



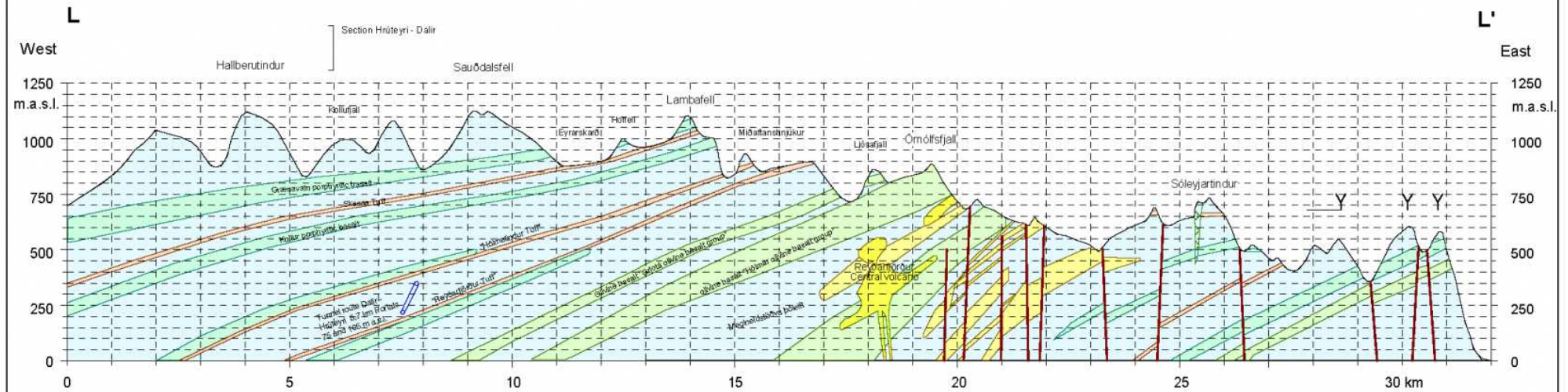
Seyðisfjörður - Egilsstaðir - Road tunnel

Schematic geological section - Based on brief field mapping



Fáskrúðsfjörður - Reyðarfjörður peninsula

Geological longitudinal section



Legend

	Tholeiite basalt		Bedded acid tuffs
	Olivine basalt		Rhyolitic andesite
	Porphyritic basalt		Dolerite intrusion
	Rhyolite		

	Fault
	Section turning point

Location see drawing 4

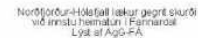
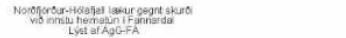


VEGAGERÐIN

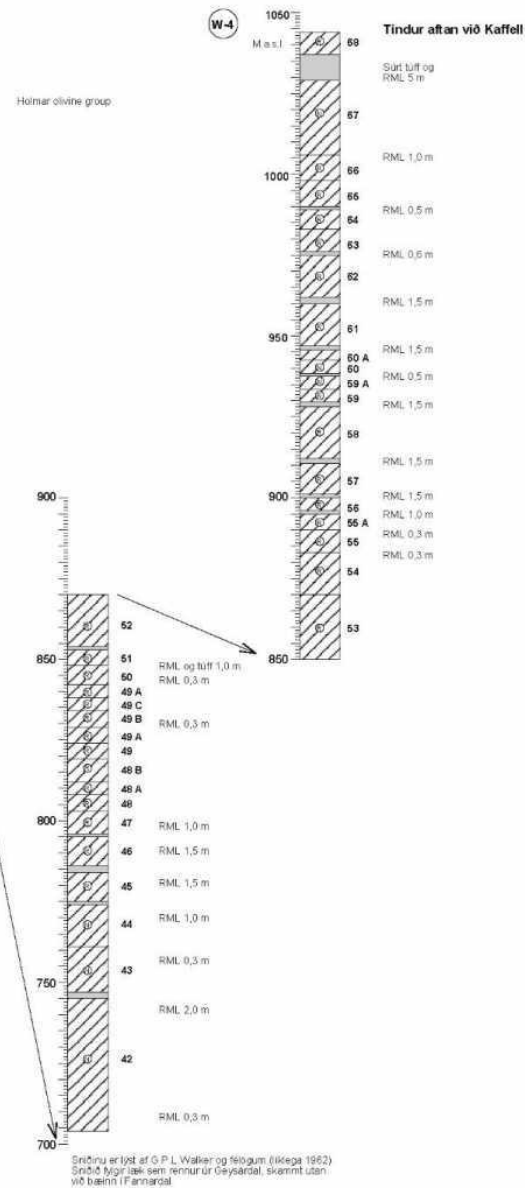
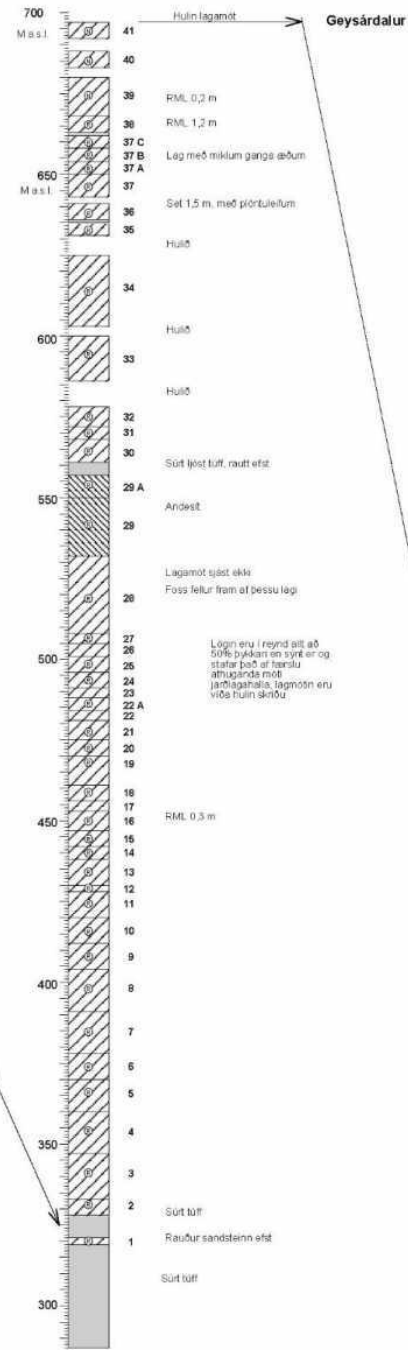
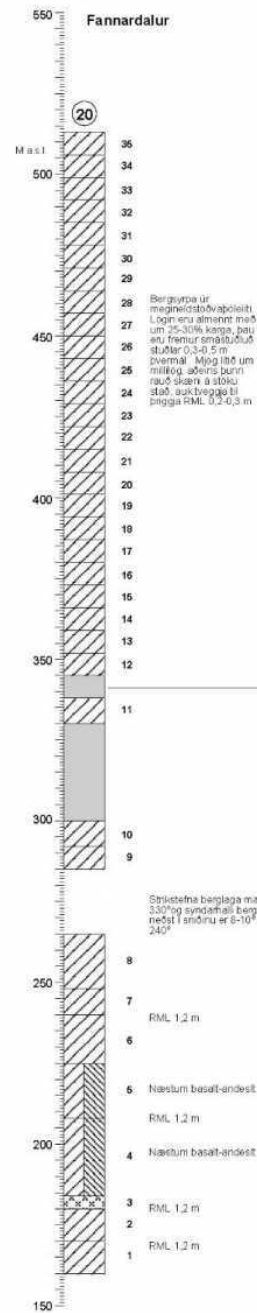
Scale	Design	AgG
	Drawn	HH/AgG
	Chk	
	Appr	



Fáskrúðsfjörður Road Tunnel
Reyðarfjörður - Fáskrúðsfjörður
Geological section L-L'

JFS-44
Jan. 2001
Drawing
5



 Jarðfræðistofnun <small>Geological Survey of Iceland</small>		Norðfjarðargöng		JFS - 60						
 VEGAGERÐIN		Jarðlagasnið í Fannardal		Febr. 2005						
Kvarði	<table><tr><td>Hanab</td><td>Ag7</td></tr><tr><td>Tinn</td><td>Ag</td></tr><tr><td>Tharf</td><td>ÖE</td></tr></table>	Hanab	Ag7	Tinn	Ag	Tharf	ÖE	Hólafljall - Hólaströnd		Teikning
Hanab	Ag7									
Tinn	Ag									
Tharf	ÖE									
				10						



			Norðfjarðargöng	JFS - 61
			Jarðlagasnið í Fannardal og Geysárdal	Febr. 2005
Kvæði:	Heim:	Agð		Teikning
	Tölur:	Agð		
	Yfirskil:	Agð		
	Skjal:	Agð		11

































