

# Um gosfjallið sum nýligani er funnið á Vágoynni

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JARÐFEINGI  
Faroese Geological Survey



FRÓÐSKAPARSETUR  
FØROYA



# Toymið



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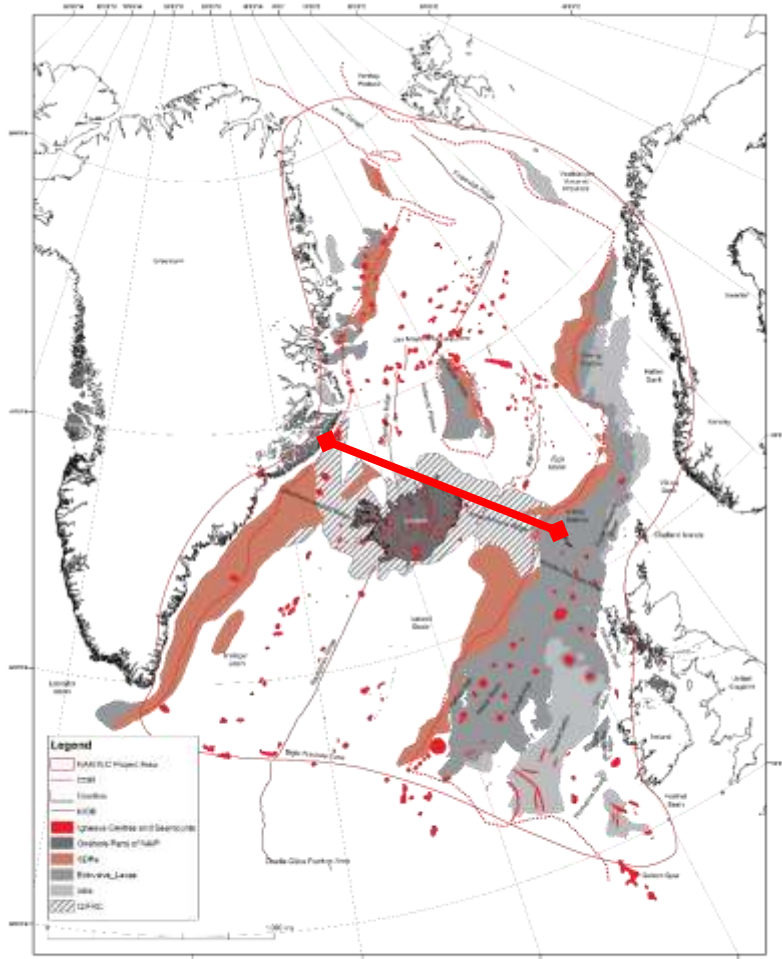
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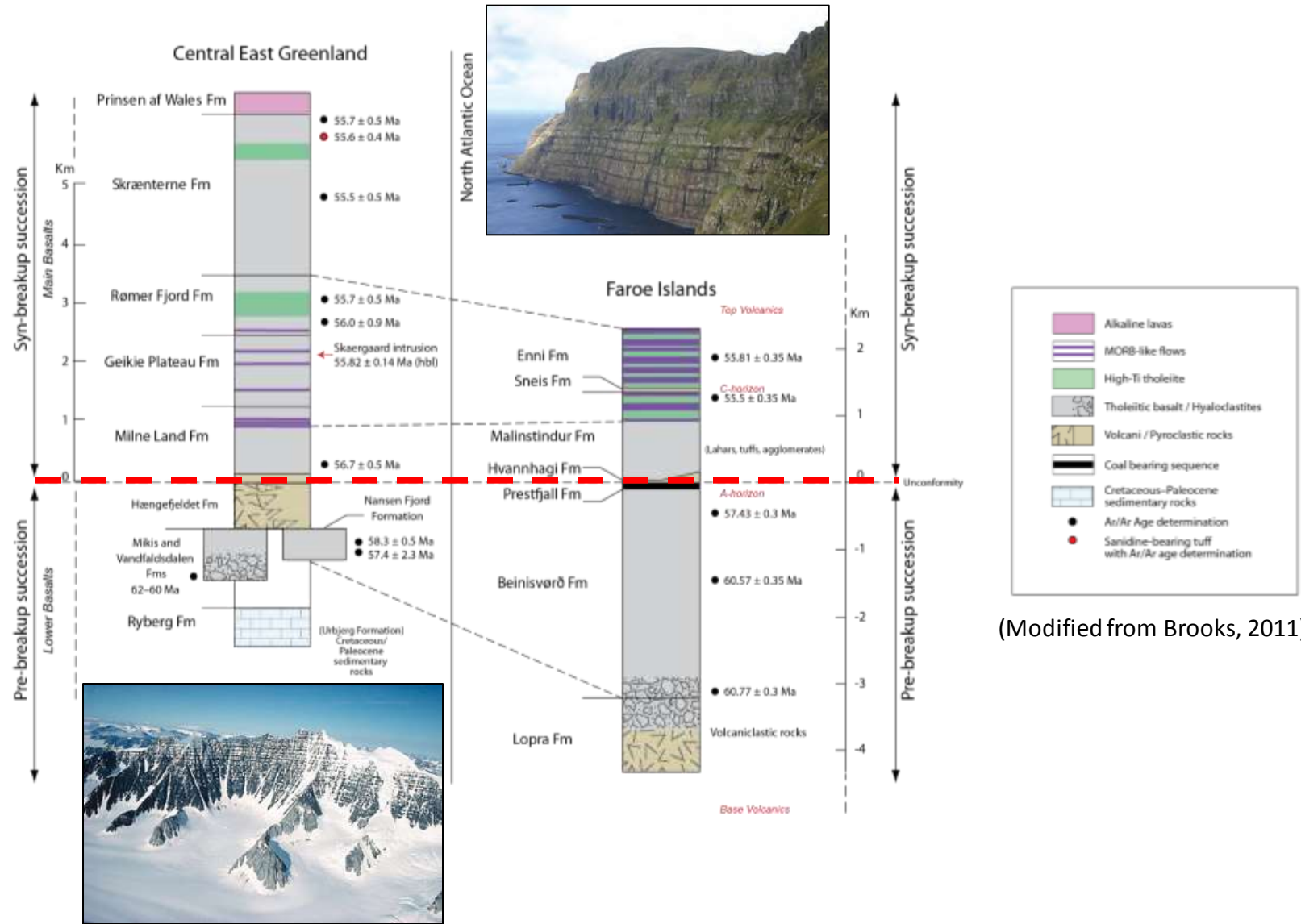




# Norðuratlantiski basalháslættin

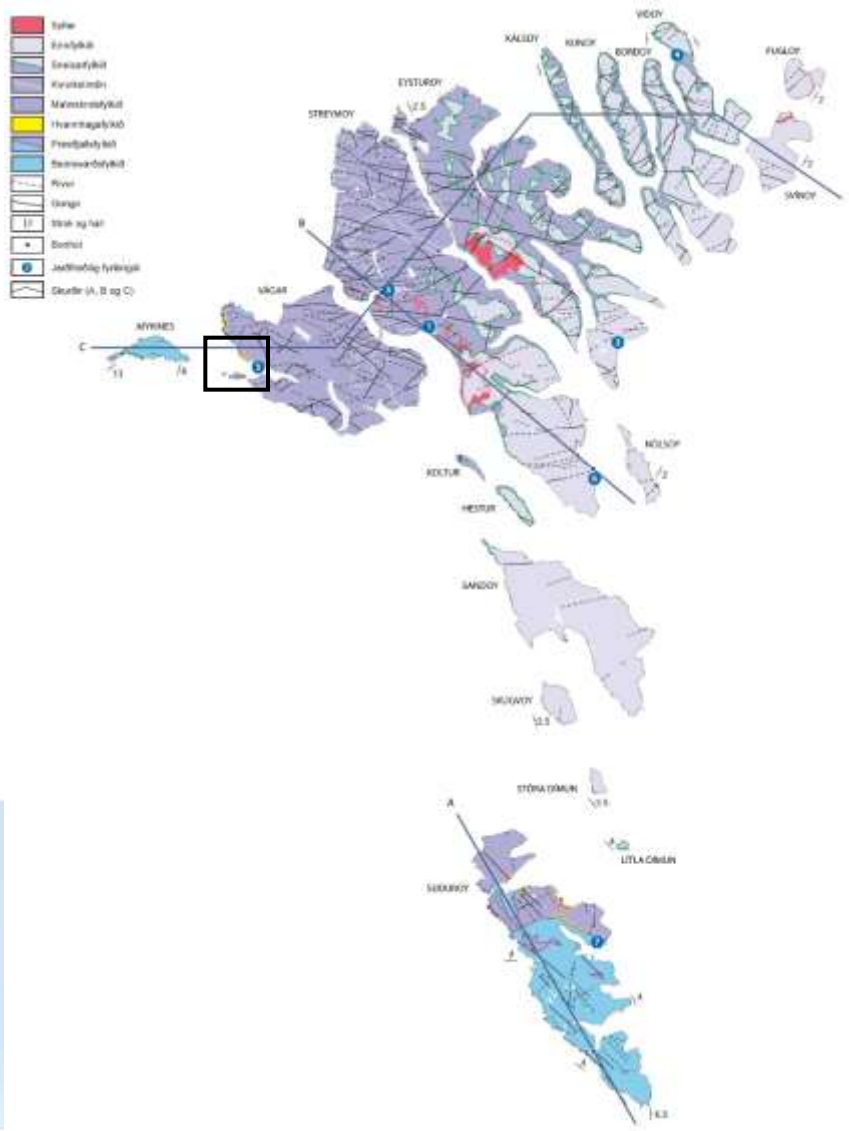


(Hopper et al. 2014, NAGTEC Atlas)

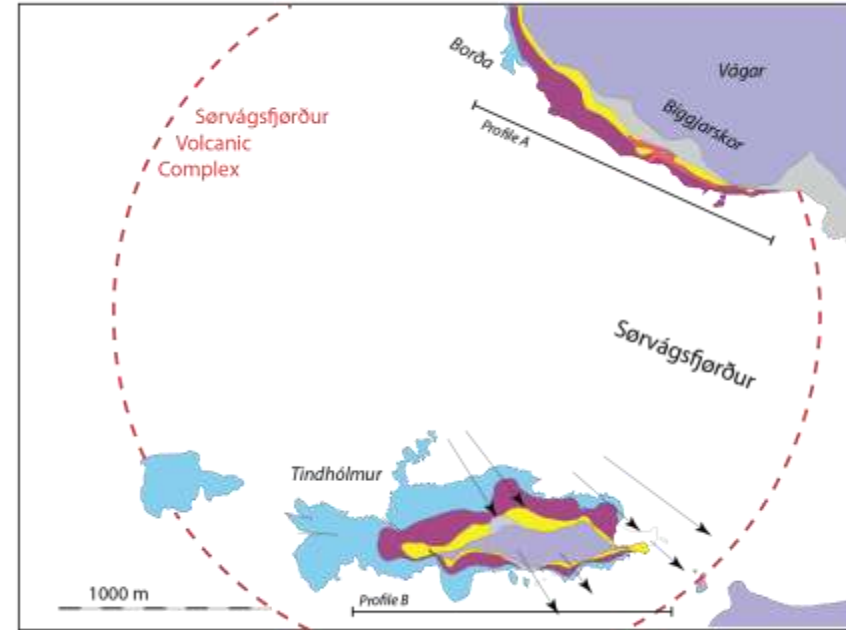
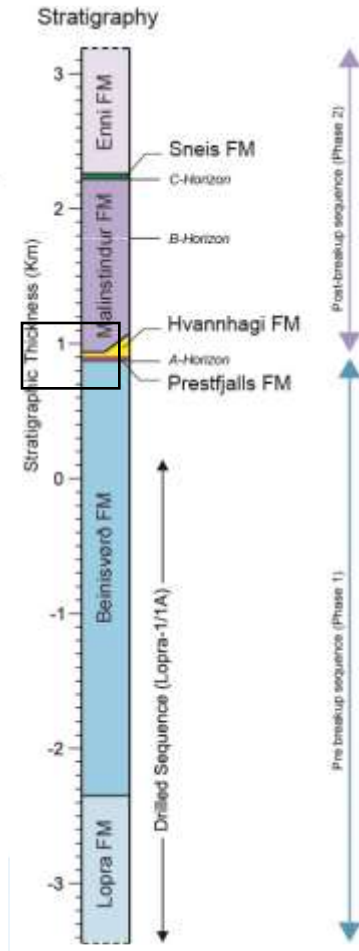


(Modified from Brooks, 2011)

# Føroya Jarðfrøði

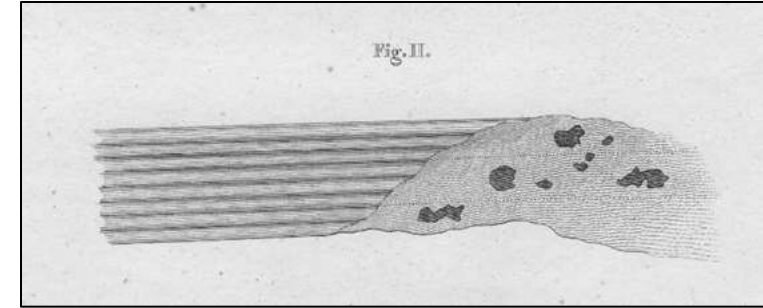


# Jarðfrøðin í Sørvágsfirði

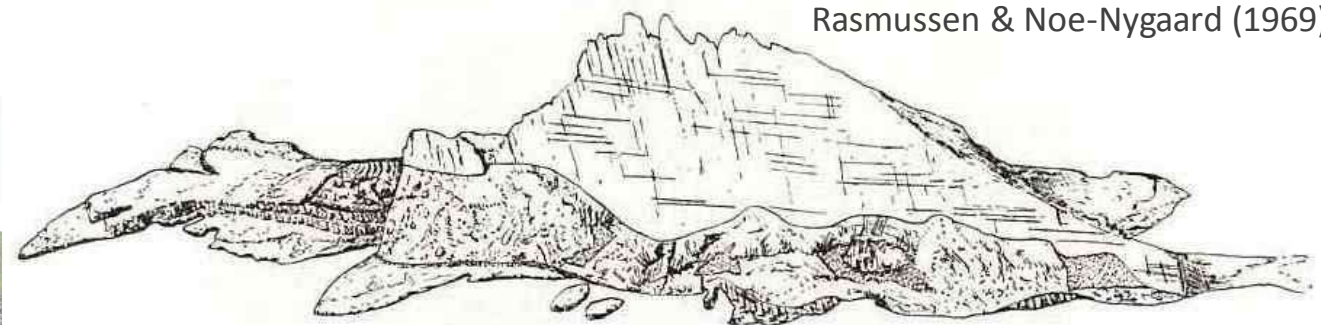


# Hvannhagafylkið (Gosmyrjan)

- Fyrstu eygleiðingarnar av hesum parti av jarðfrøðini
  - Forchammer (1824), Geikie (1880), Helland (1880), Bøggild (1922) and Walker and Davidsson (1936)
- Rasmussen and Noe-Nygaard (1969) – **Tuff-agglomerate Zone**
  - Explosive volcanism following the deposition of the Coal bearing Formation (Prestfjall Fm), irregular thickness and heavily intruded. Lapilli products, volcanic bombs and lithic fragments.
  - **Bíggjarskor** - Intruded and dislocated sections of agglomerate and coal-bearing section. Photo + sketch
  - **Tindhólmur** - Intruded and dislocated sections of agglomerate and coal-bearing section. *Photo + sketch*



Forchammer (1824)



Rasmussen & Noe-Nygaard (1969)

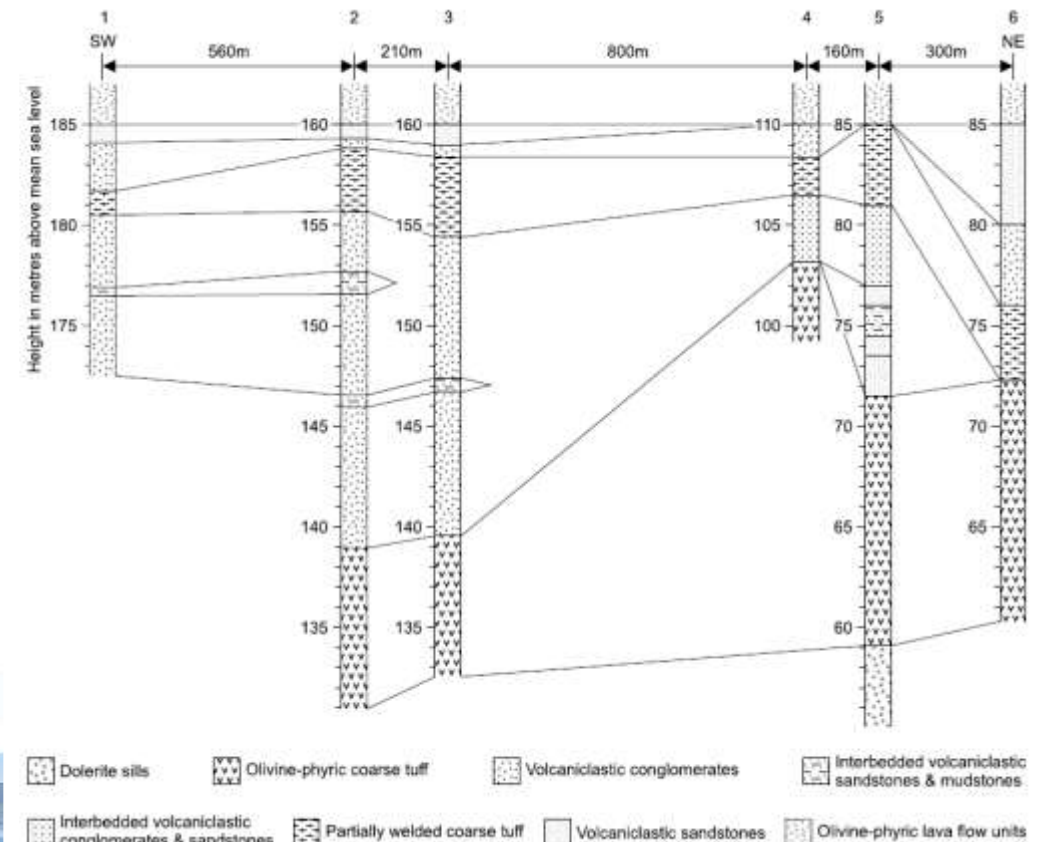
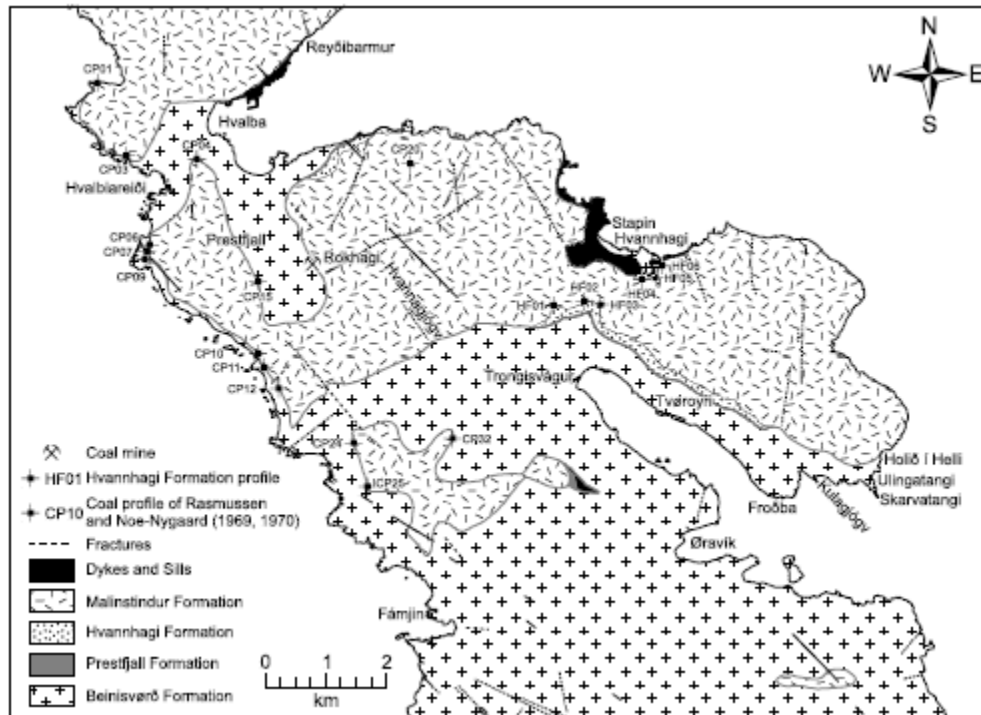




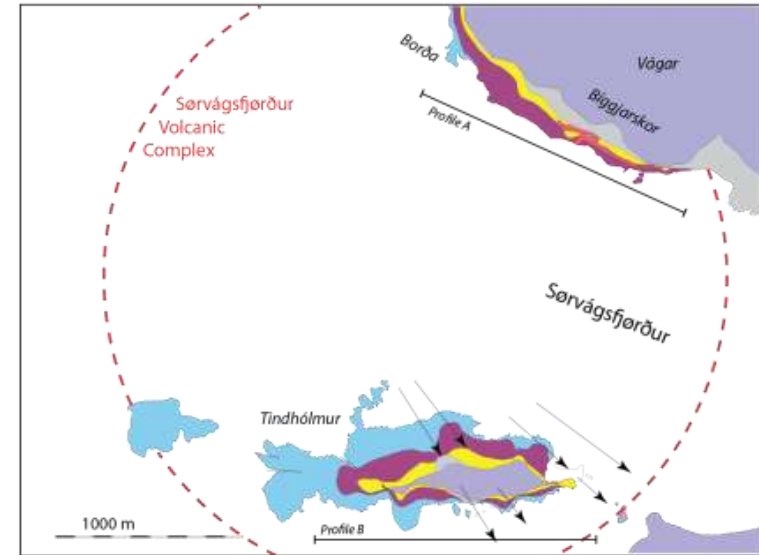
# Hvannahagafylkið / Gosmyrjan

- Passey and Jolley (2009) - Hvannahagi Formation
  - Distinct lithologic difference from flow lobes in Malinstindur Fm. Pyroclastic and sedimentary units (fig), tuffs and volcanoclastic sediments.

- Detailed logs from Hvannahagi



# Jarðfrøðin í Sørvágsfirði

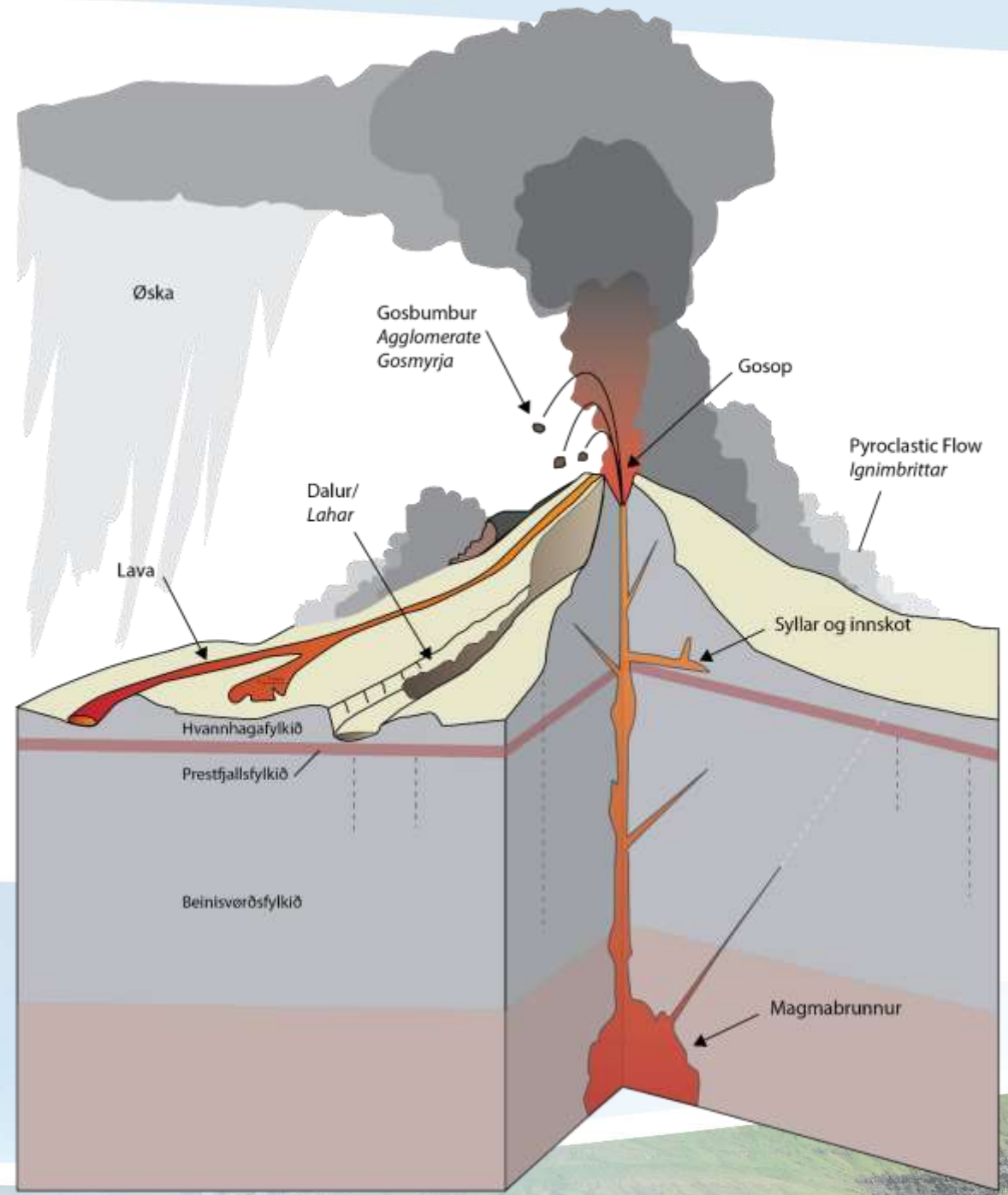


**LEGEND**

- Sills and intrusions
- Enni FM
- Sneis FM
- Kvivík bed
- Malinstindur FM
- Hvannahagi FM
- Prestfjall FM
- Beinivørð FM
- Fractures
- Dykes
- Stroke og dip
- Well Site
- Volcanic Complex



# Hvussu eru gosfjöll uppbyggd?





# Fyrirreikingar til arbeiði í Bíggsjarskor

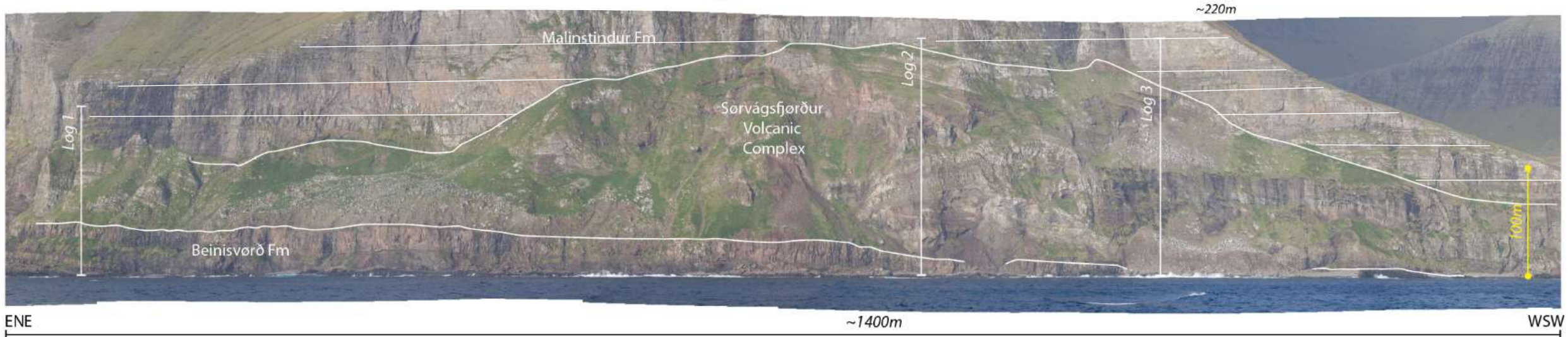




# Bíggjarskor og Tindhólmur – tvørskurðir og loggar

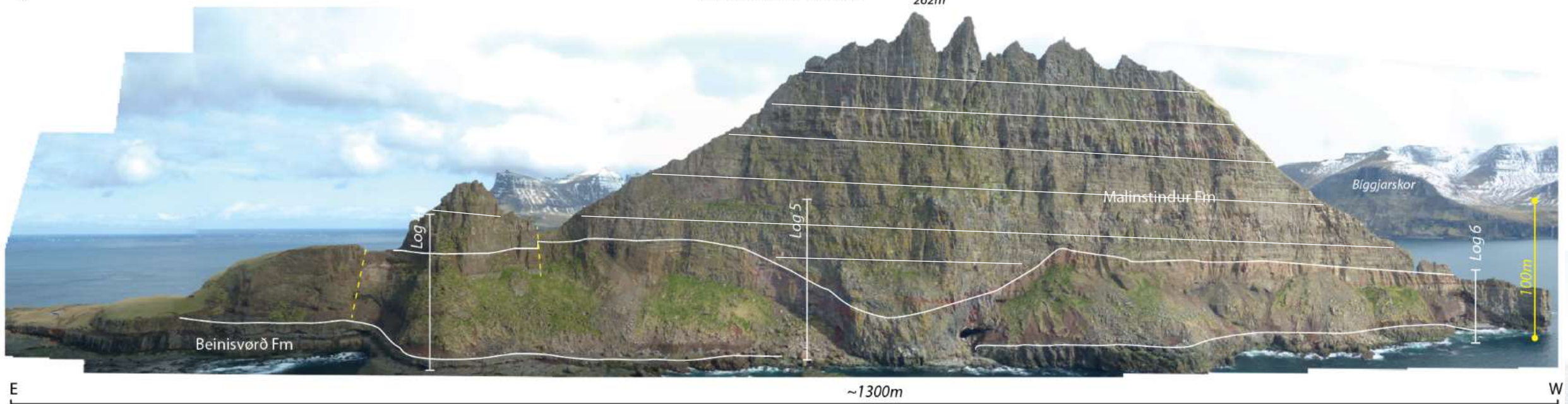
A)

Bíggjarskor Profile



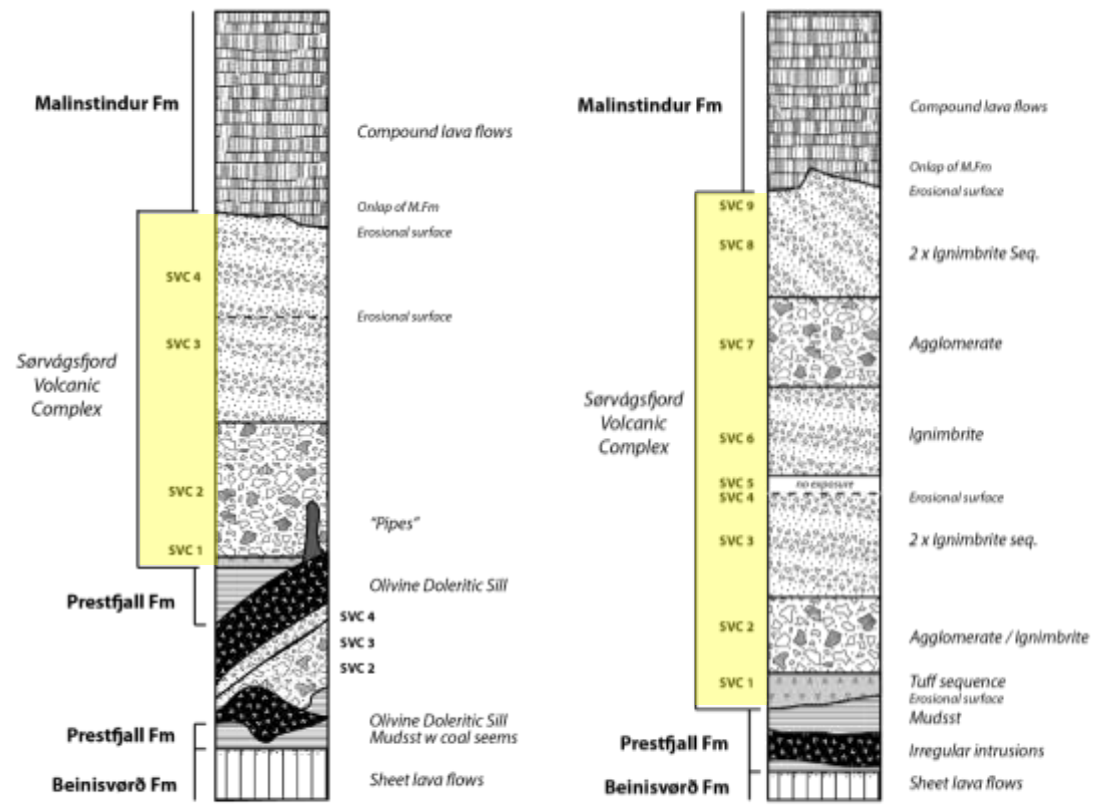
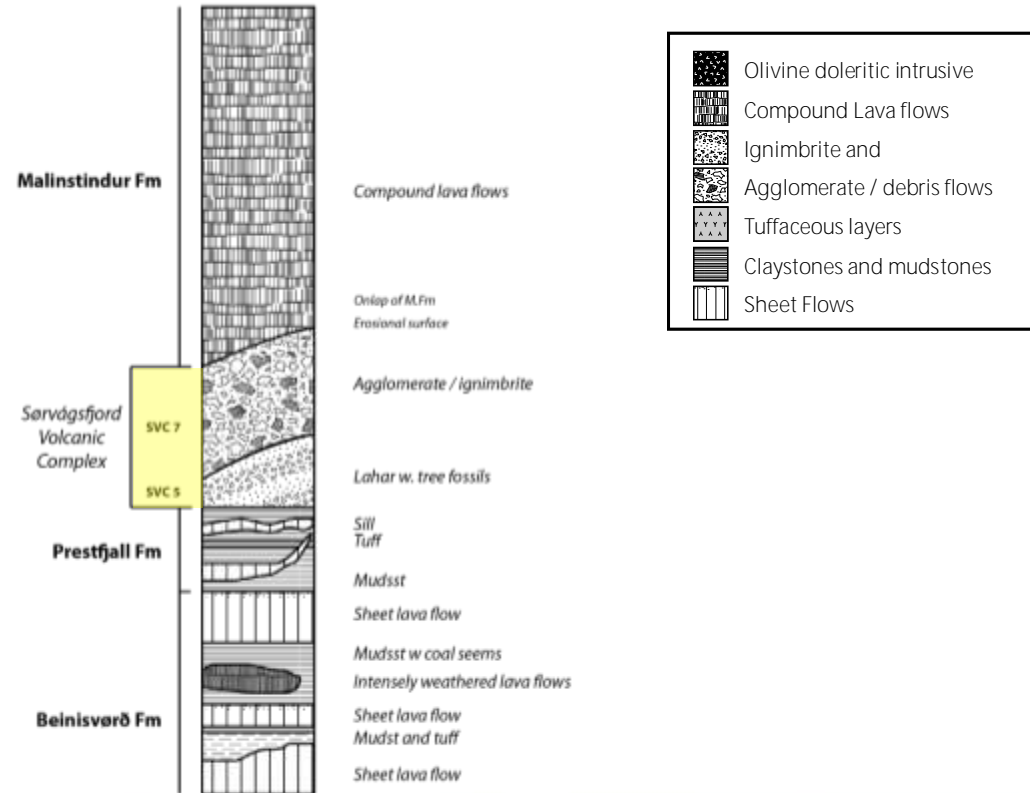
B)

Tindhólmur Profile



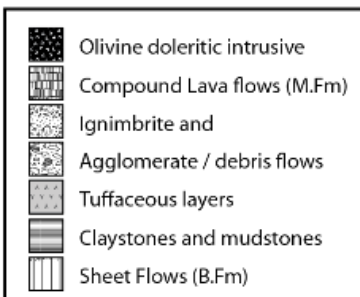
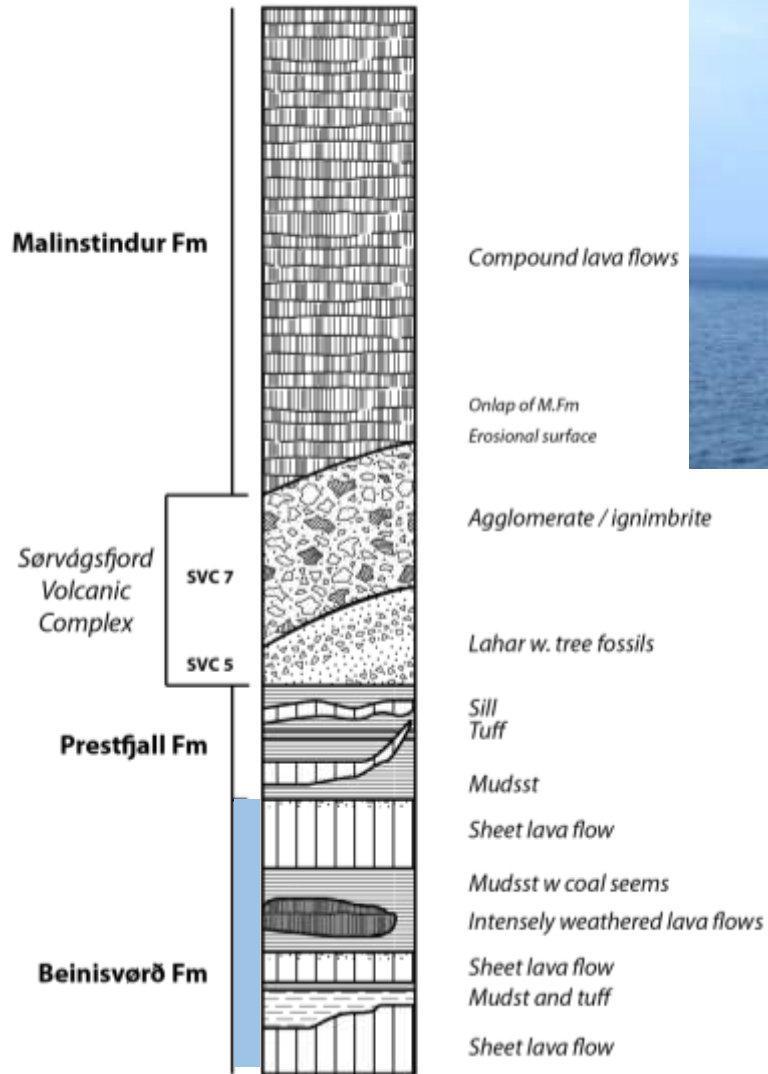


# Bíggjarskor – lagskipan og grótsløg



# Grótsløg og fláabygnaður: Beinivørðsfylkið

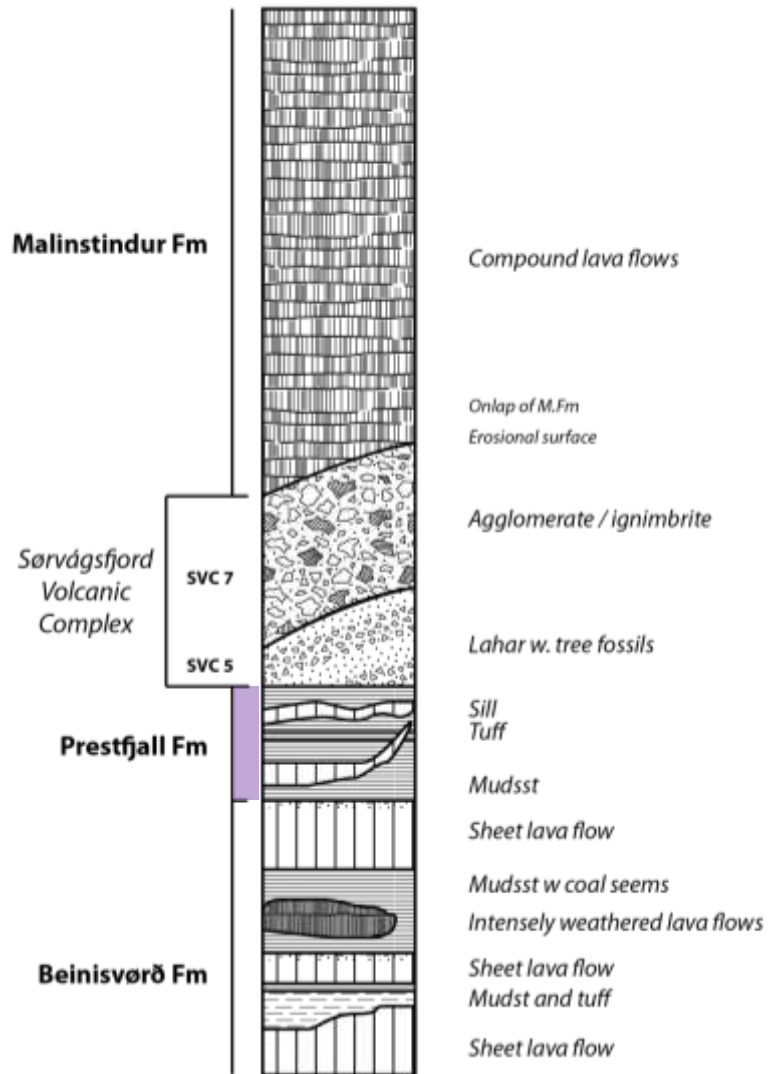
Bíggjarskor West Flank



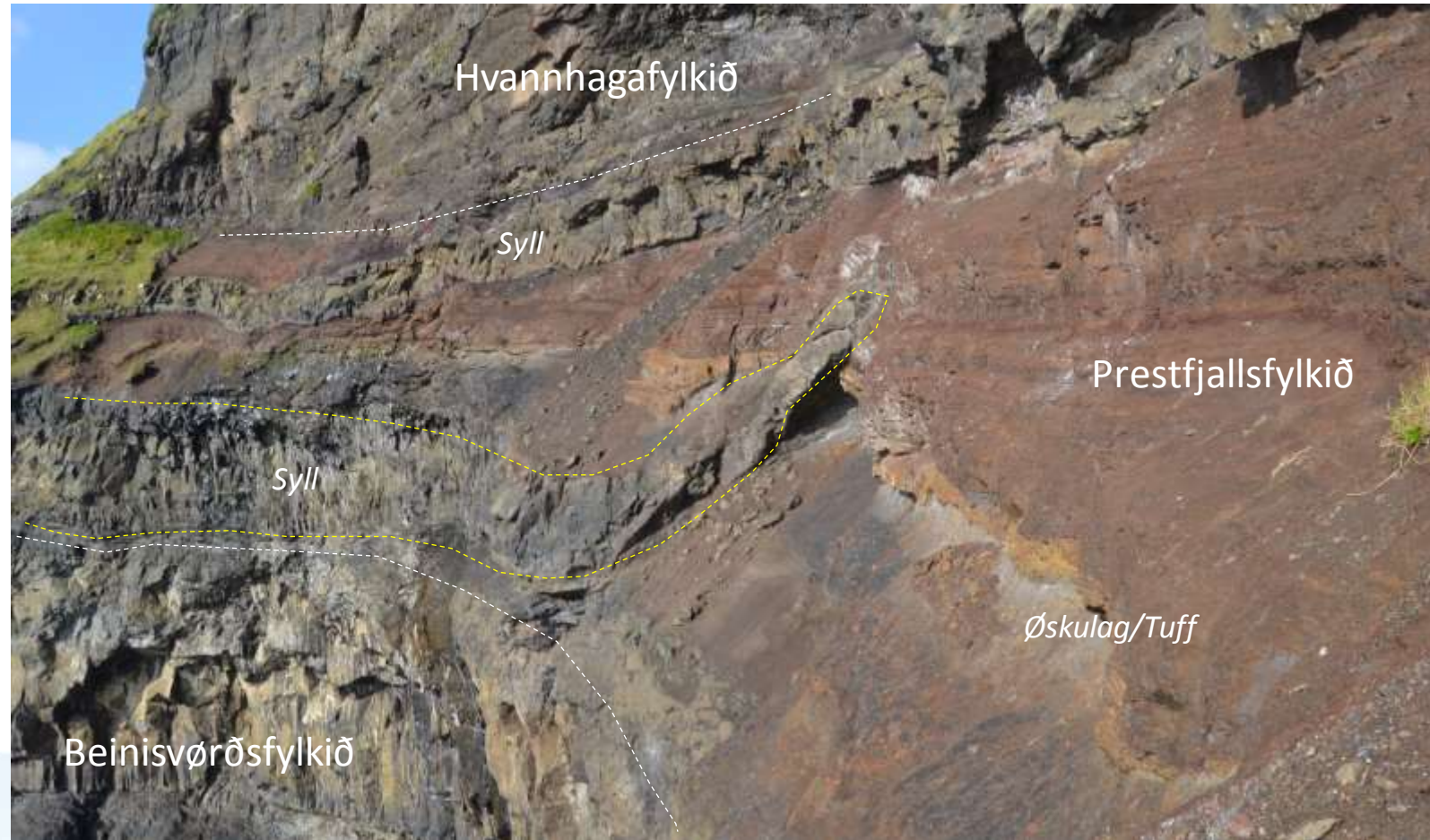


# Grótsløg og fláabygnaður : Prestfjallsfylkið – Legugrýti, leirgrýti við øsku-/tuffløgum

Bíggjarskor West Flank



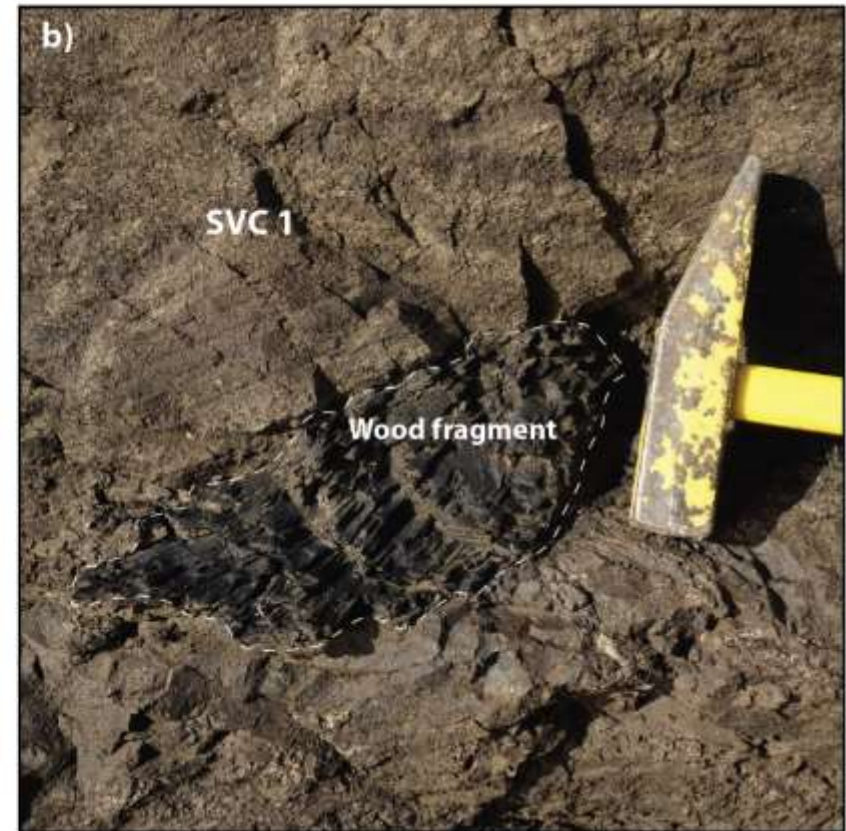
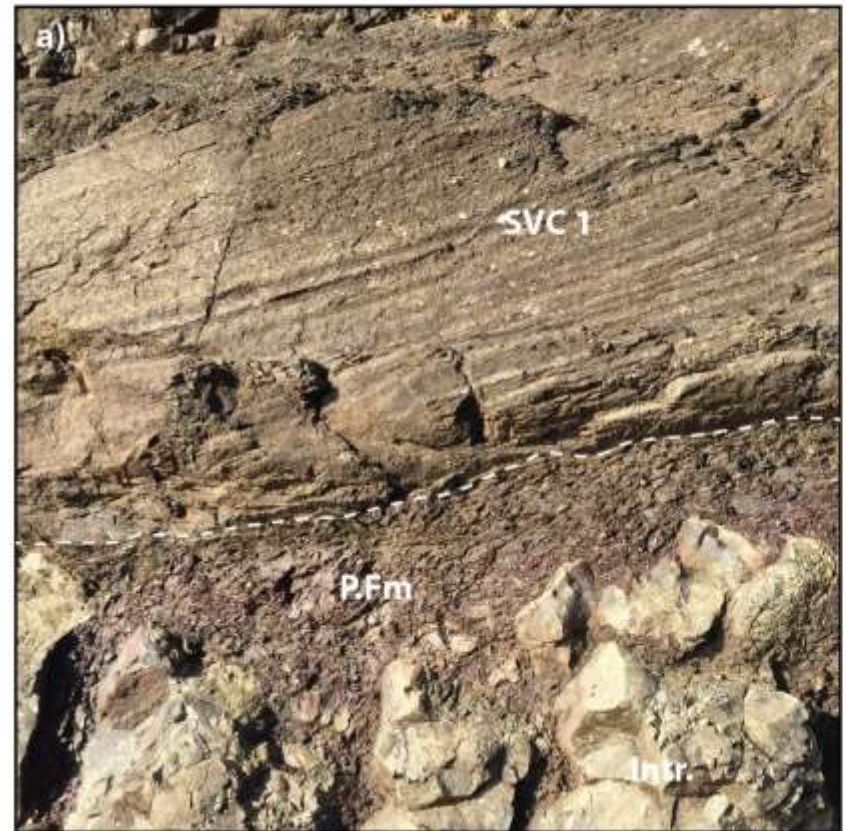
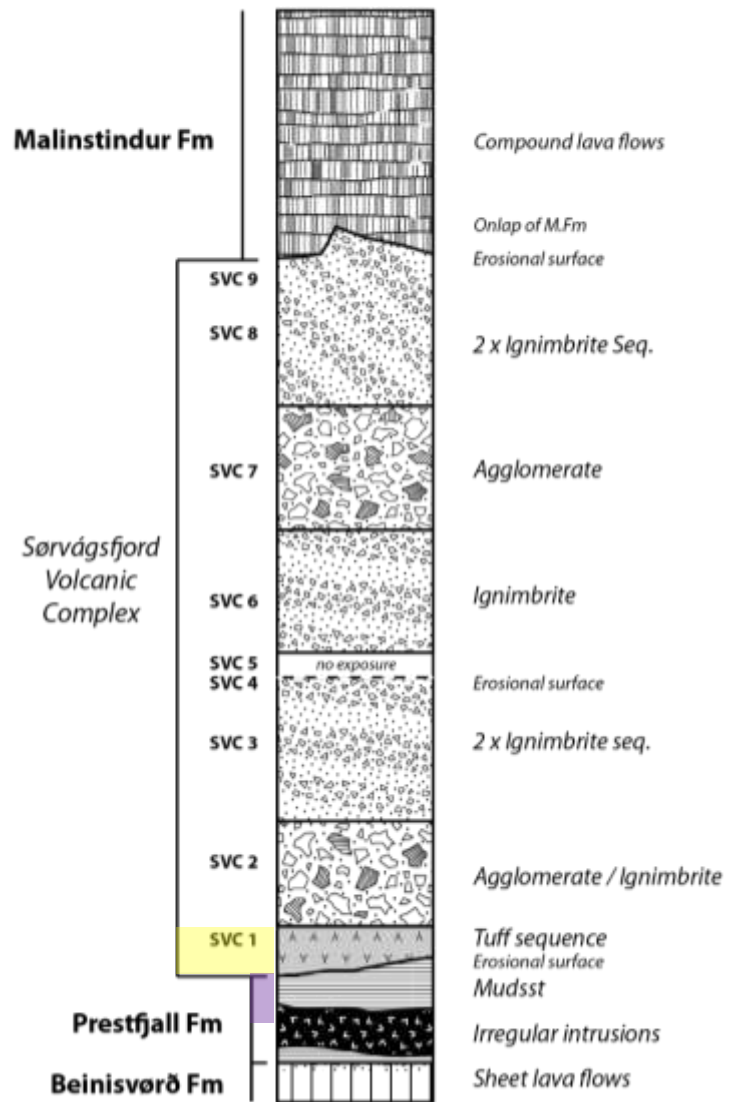
Bíggjarskor W





# Grótsløg og fláabygnaður : SVC 1 – Gos-legugrýti og øskuløg, steinrenningar

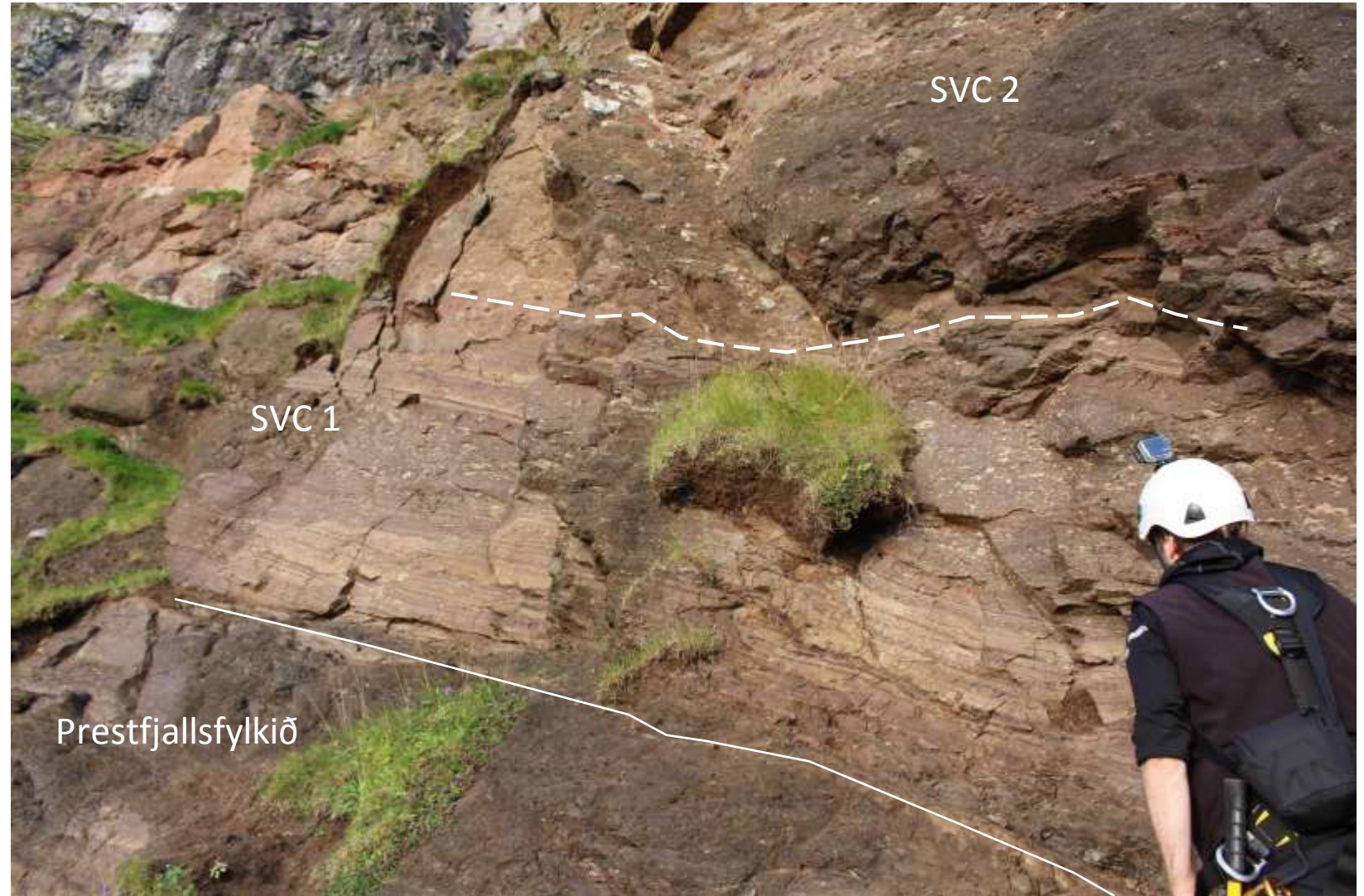
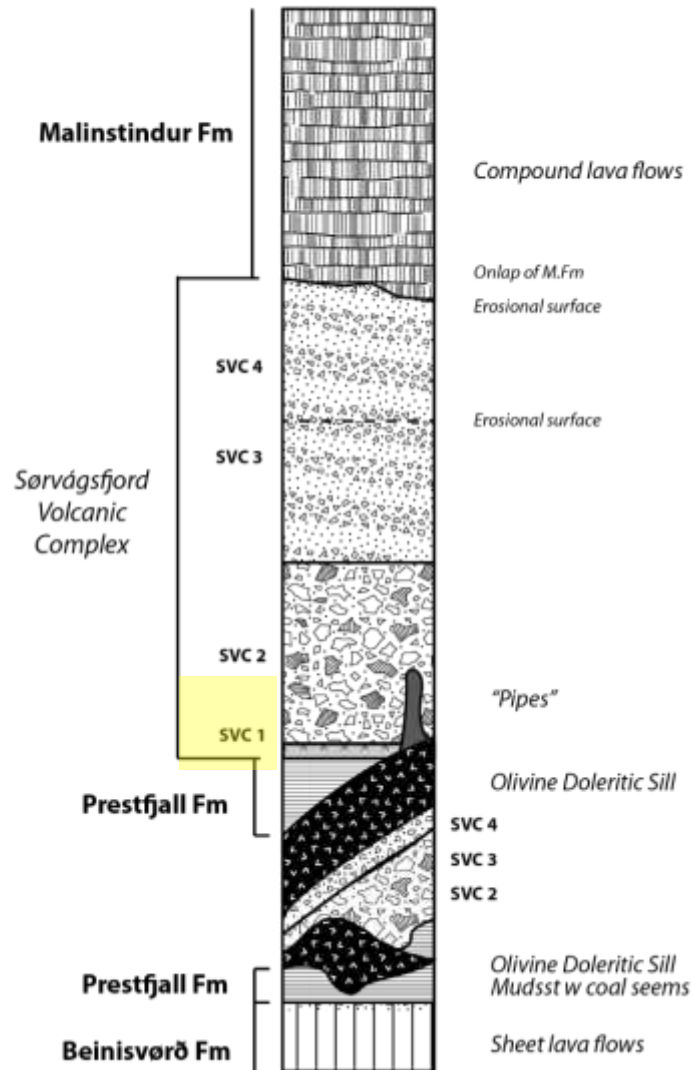
Main Biggjarskor Profile





# Grótsløg og fláabygnaður : SVC 1-2) – Skift frá øskuløgum til gosmyrju

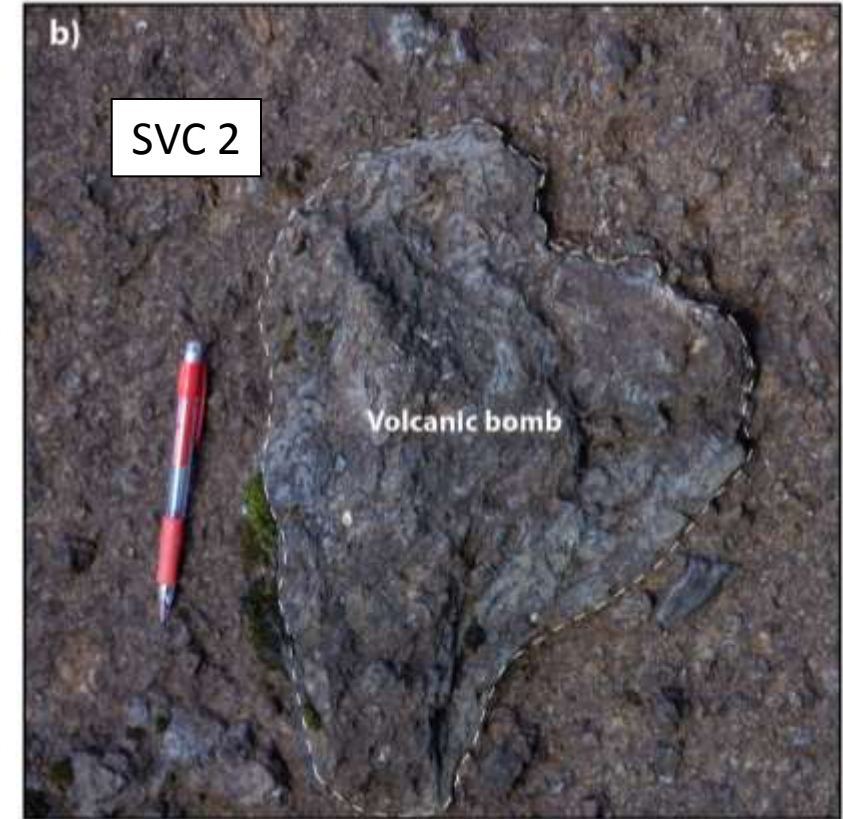
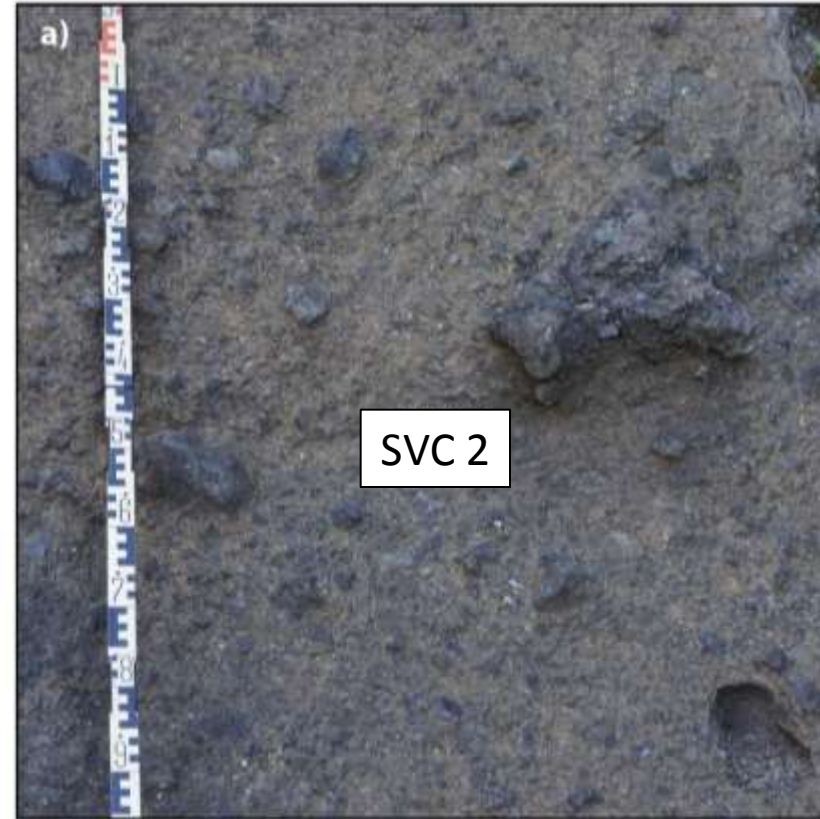
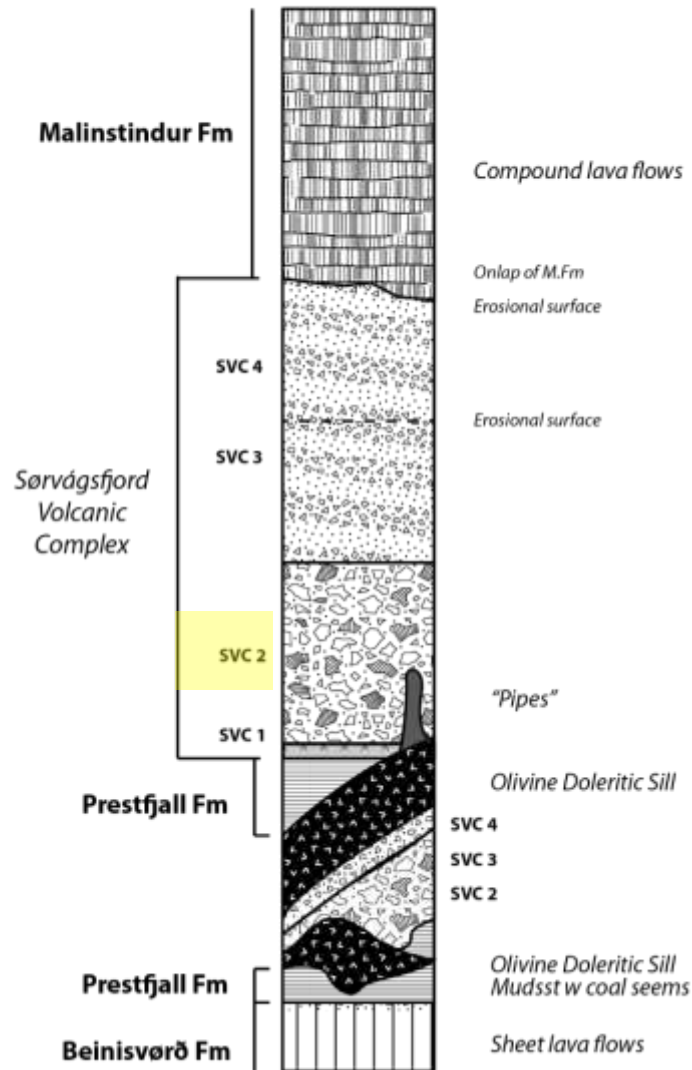
Bíggjarskor Central Profile





# Grótsløg og fláabygnaður : SVC 2) – Gosmyrja (agglomerate), við gosbumbum. Tætt við gosopið

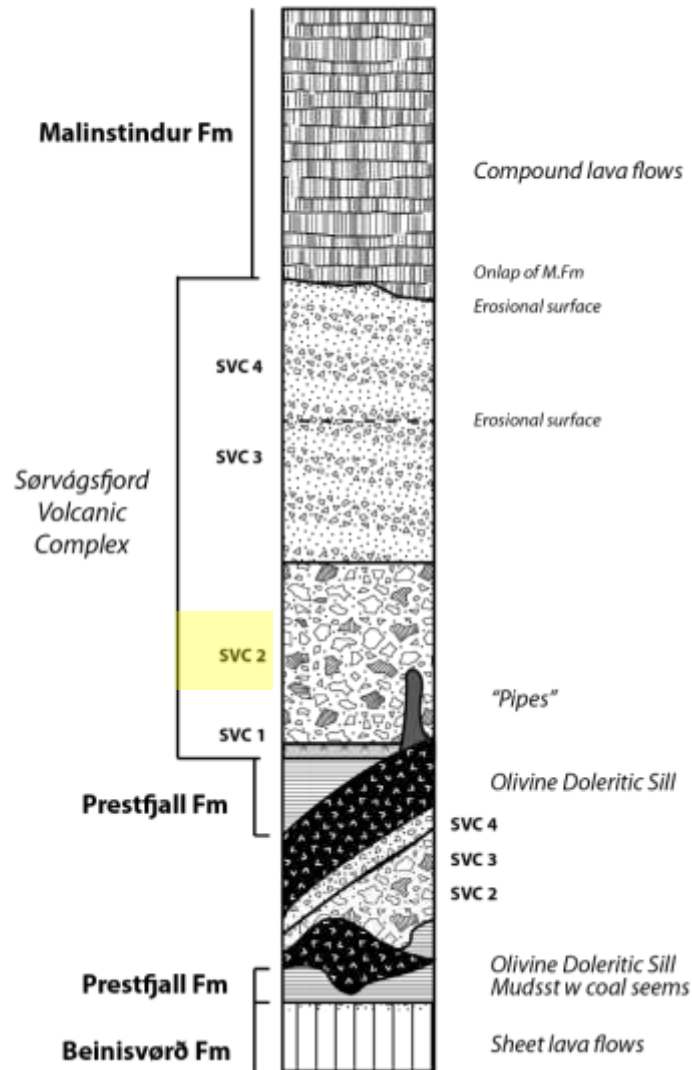
Bíggjarskor Central Profile





# Grótsløg og fláabygnaður : SVC 2) – Lagdeild gosmyrja, skiftandi gosvirksemi.

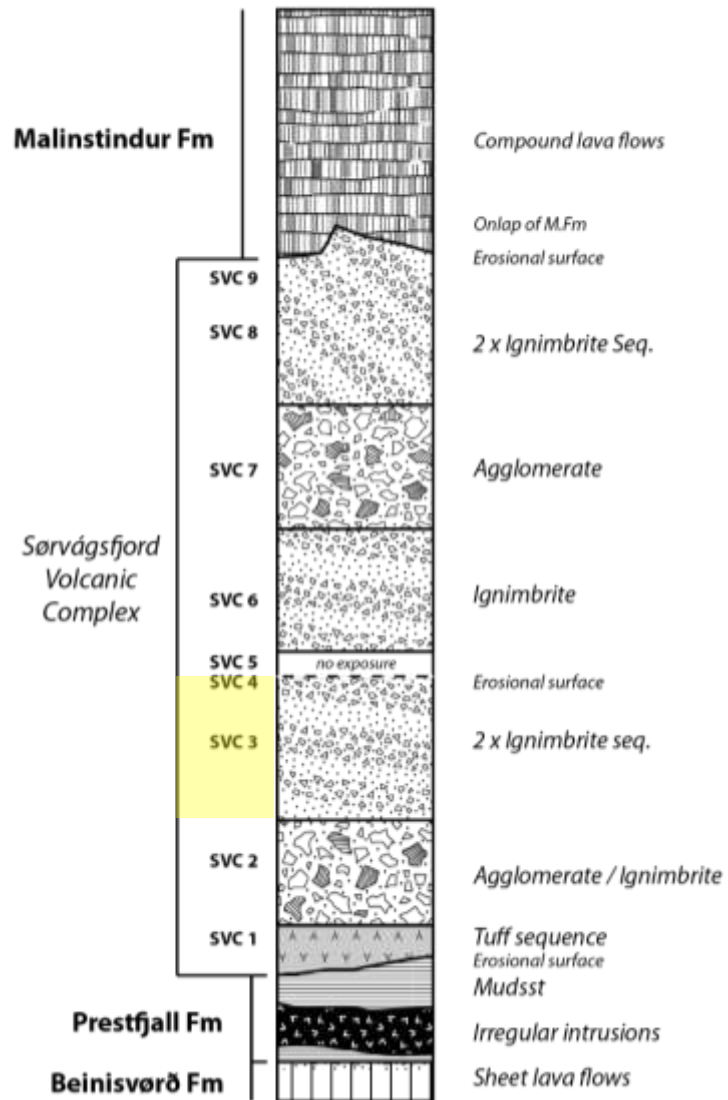
Bíggjarskor Central Profile





# Grótsløg og fláabygnaður : SVC 4) – Niðurtærd fløta (Bíggjarskor)

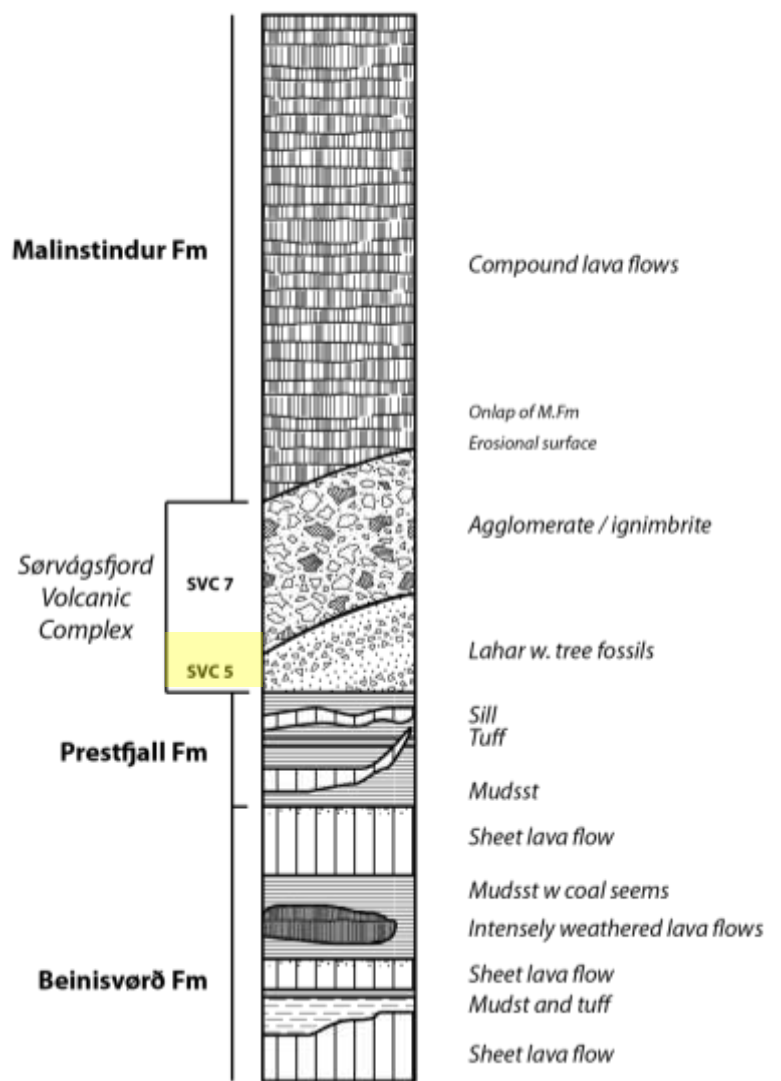
Main Bíggjarskor Profile





# Grótsløg og fláabygnaður : SVC 5) – Lahar við steinrunnum viði

Bíggjarskor West Flank



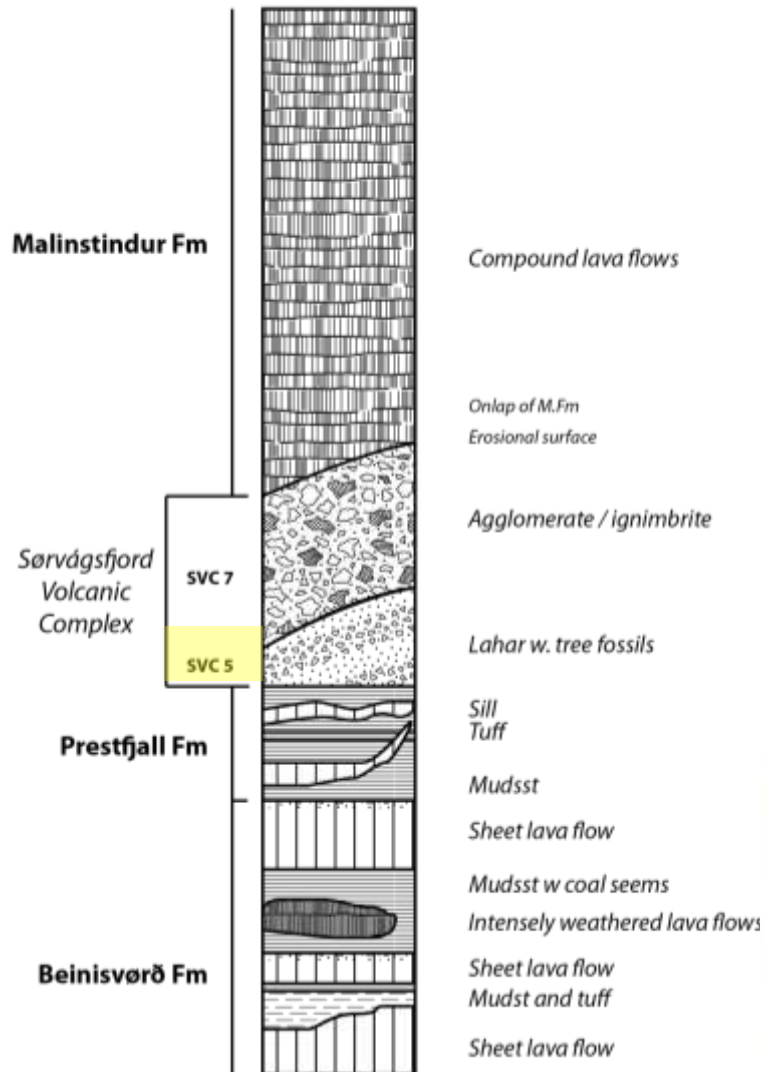
Bíggjarskor W





# Grótsløg og fláabygnaður : SVC 5) – Lahar við steinrunnum viði og grótmorl (Debris flow)

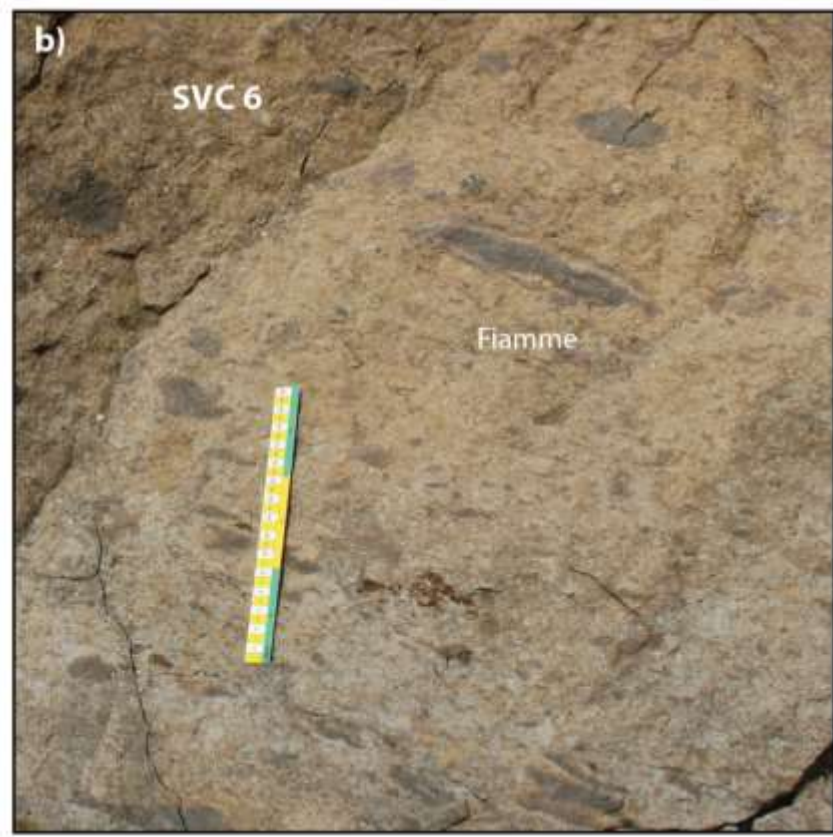
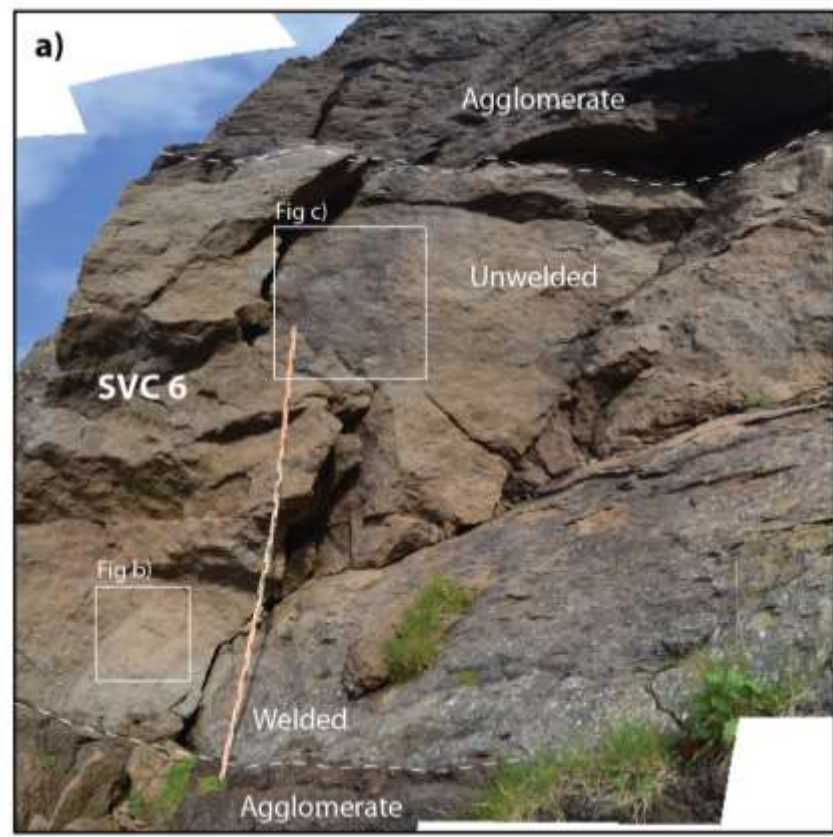
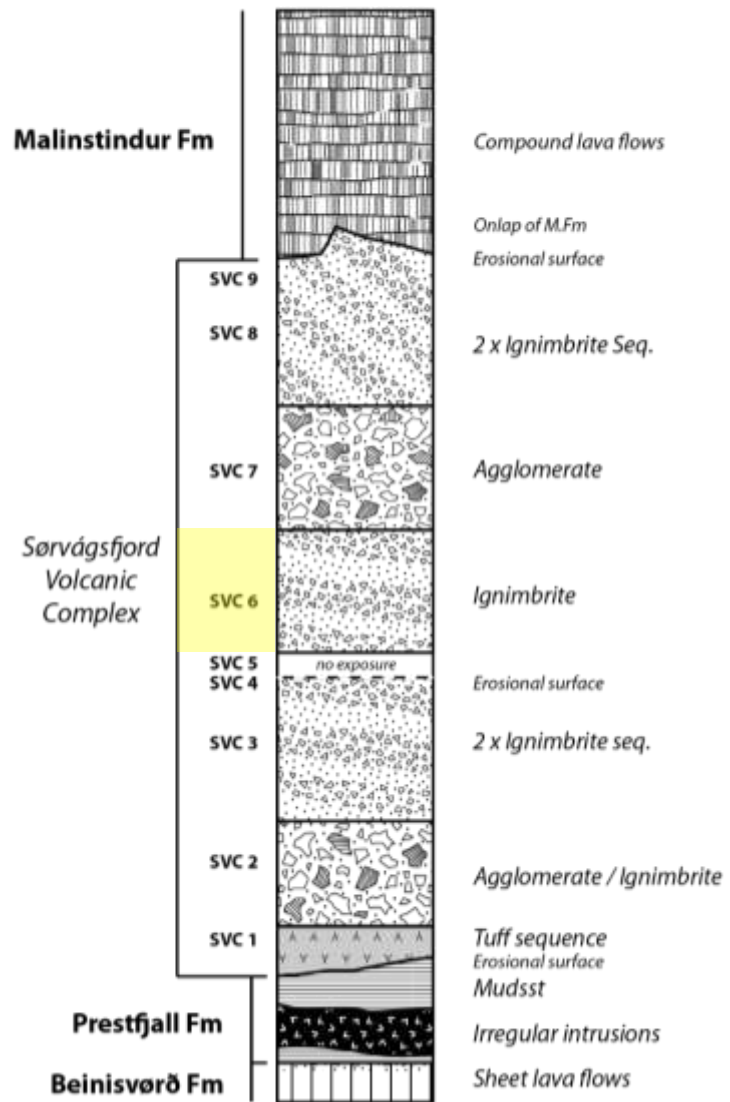
Bíggjarskor West Flank





# Grótsløg og fláabygnaður : SVC 6) – Ignimbritt eindir og gosmyrjur (agglomerate)

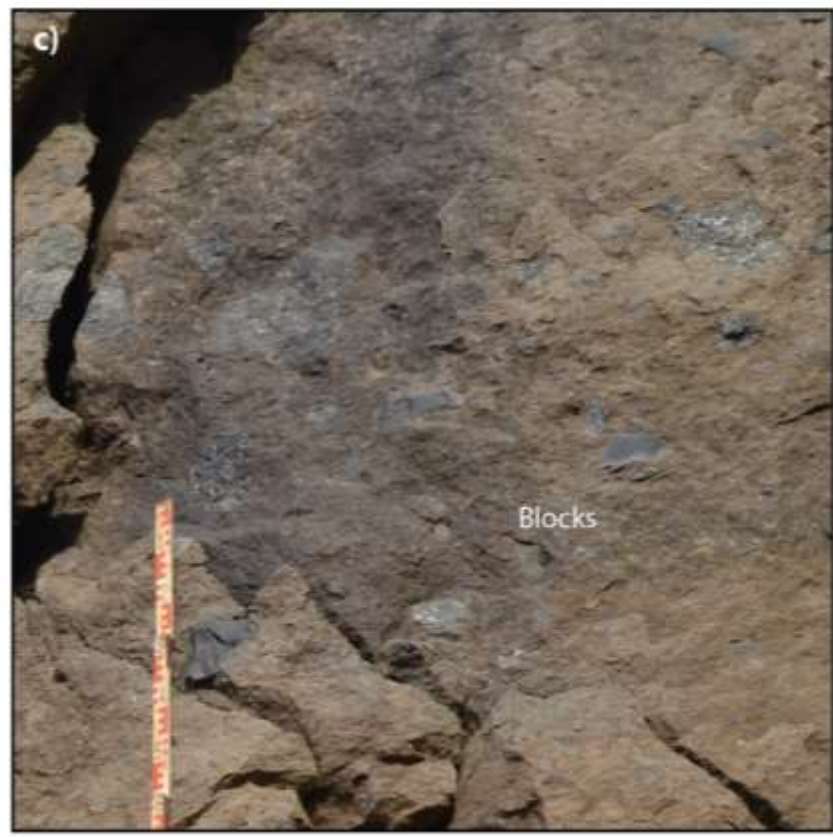
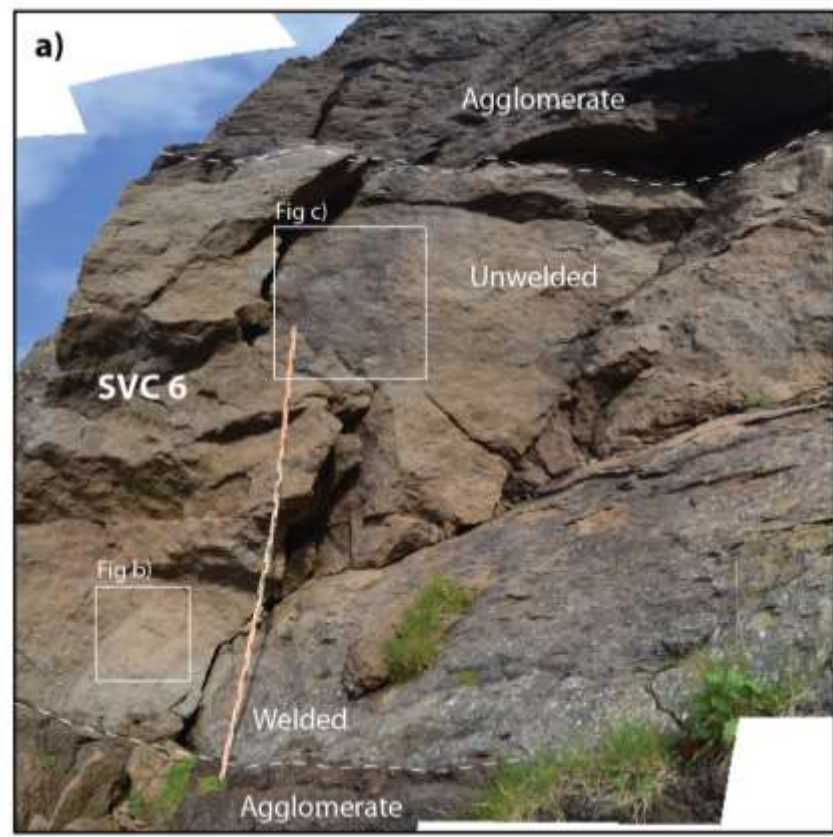
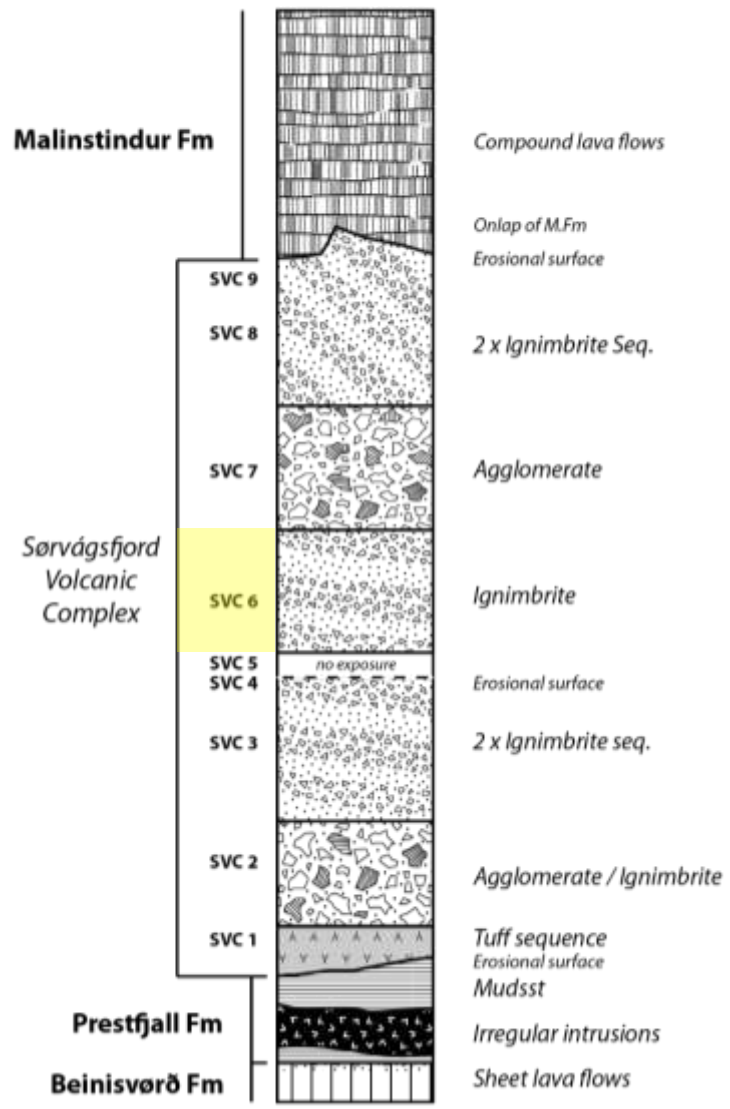
Main Biggjarskor Profile





# Grótsløg og fláabygnaður : SVC 6) – Ignimbritt eindir og gosmyrjur (agglomerate)

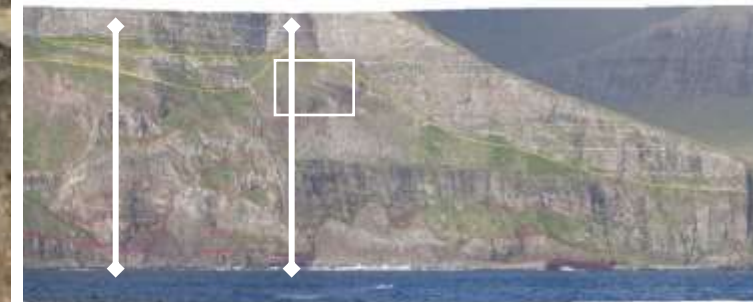
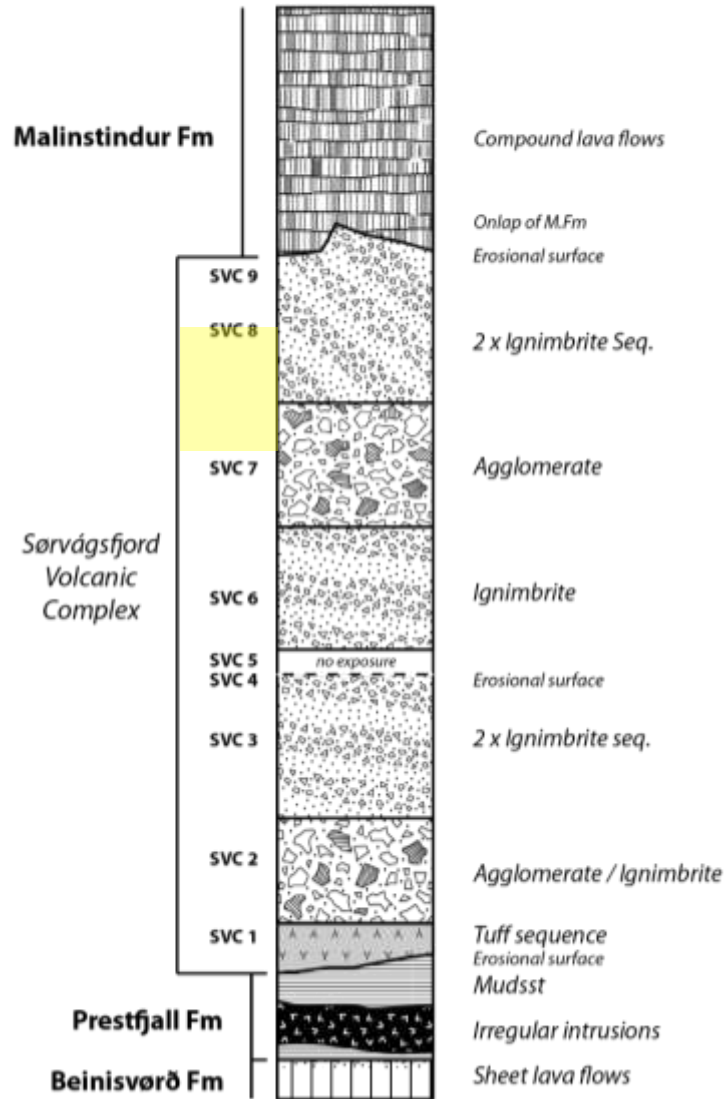
Main Biggjarskor Profile





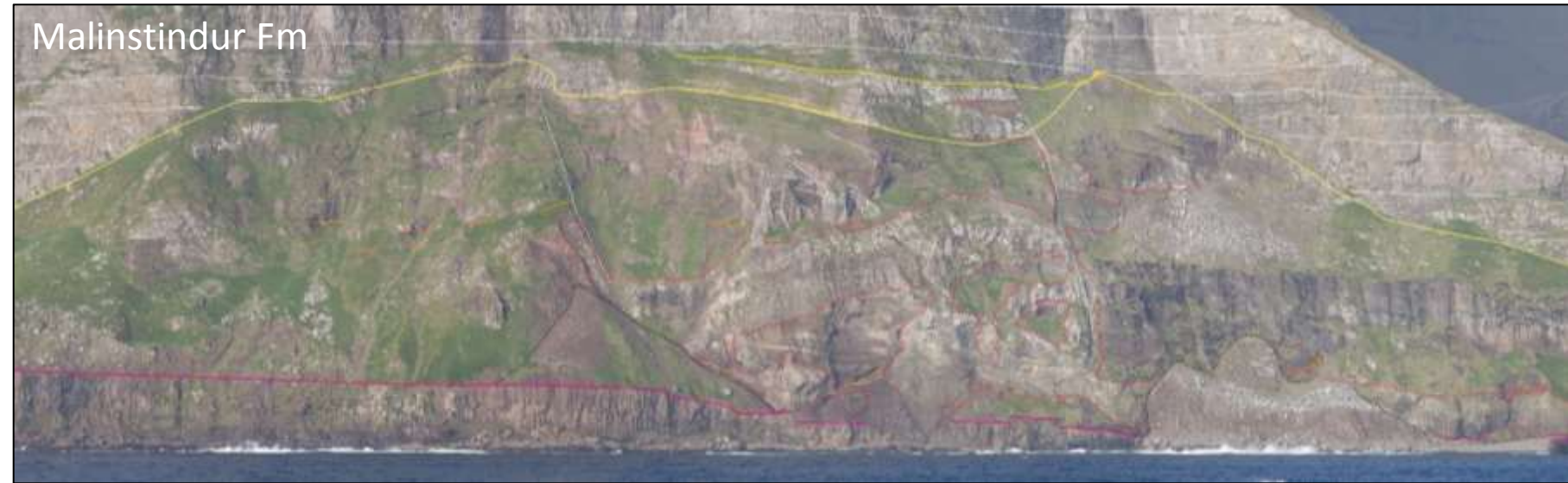
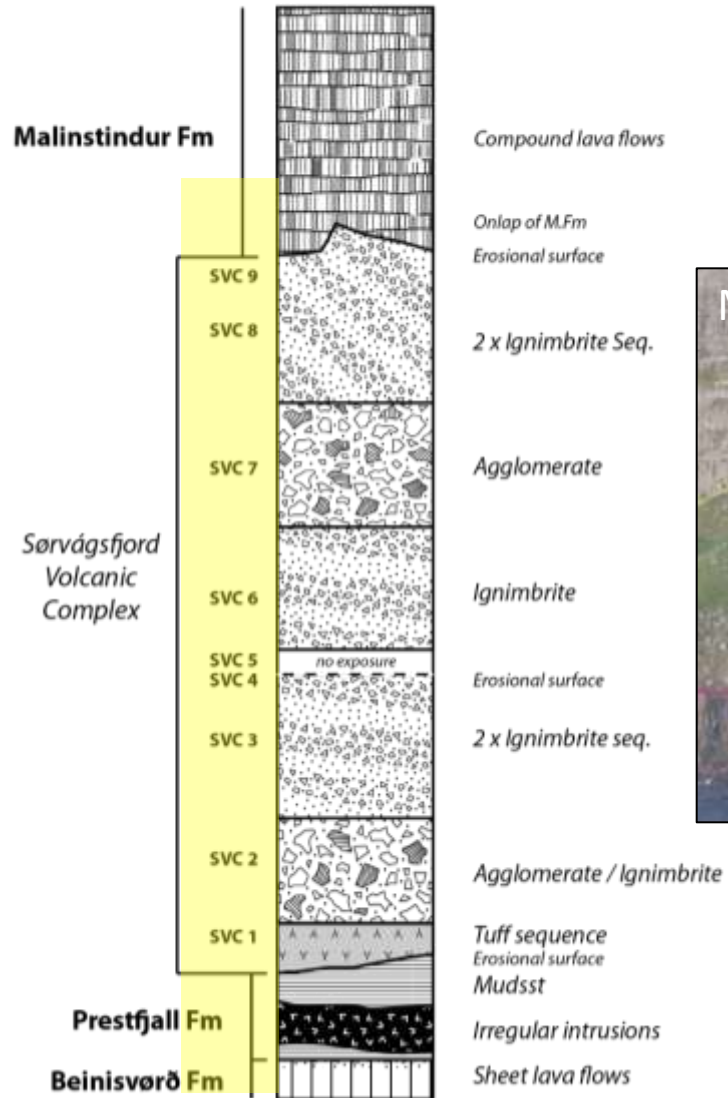
# Grótsløg og fláabygnaður : SVC 7) – Gosmyrja og grótmorl (debris flows)

Main Biggjarskor Profile



# Grótsløg og fláabygnaður : SVC 9) – Niðurbróting, máan / Malinstindur lavafláir leggjast omaná gosfjallið

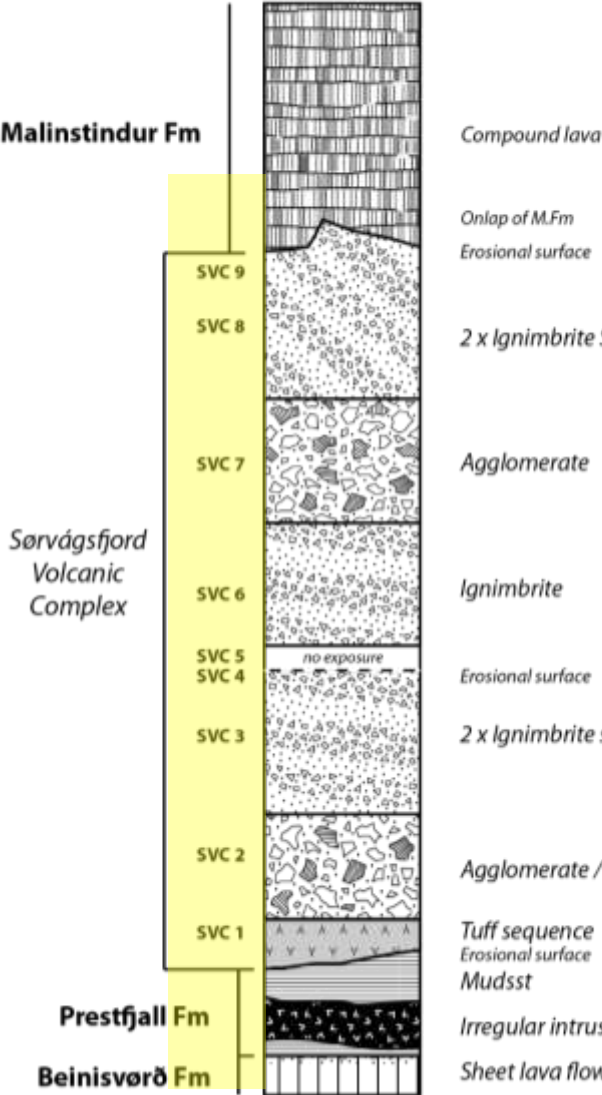
Main Biggjarskor Profile





# Grótslög og fláabygnaður :

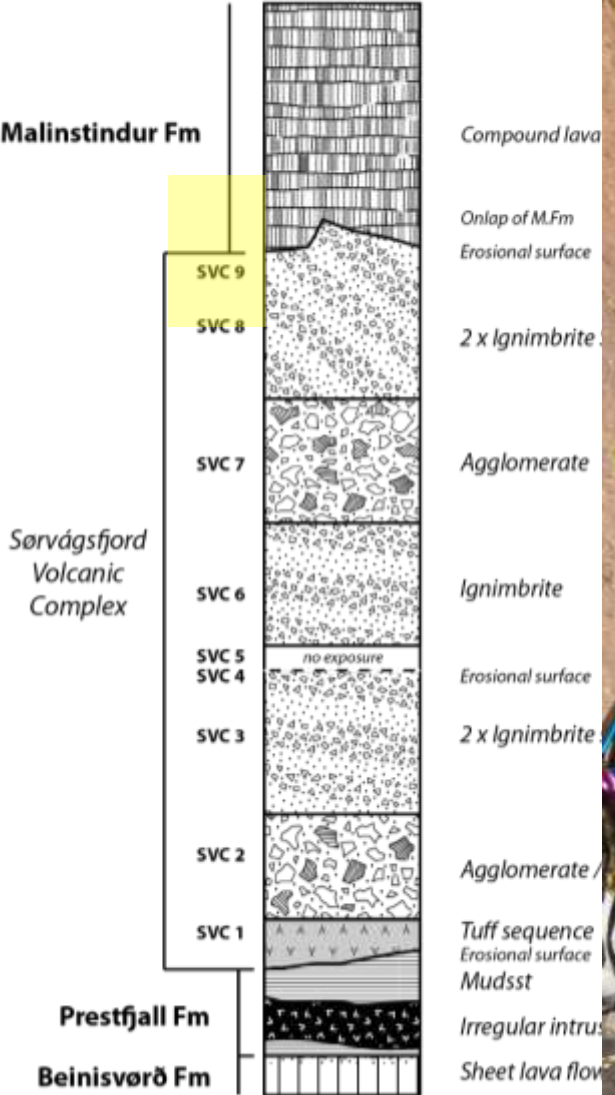
Main Biggjarskor Profile





# Grótslög og fláabygnaður :

Main Biggjarskor Profile

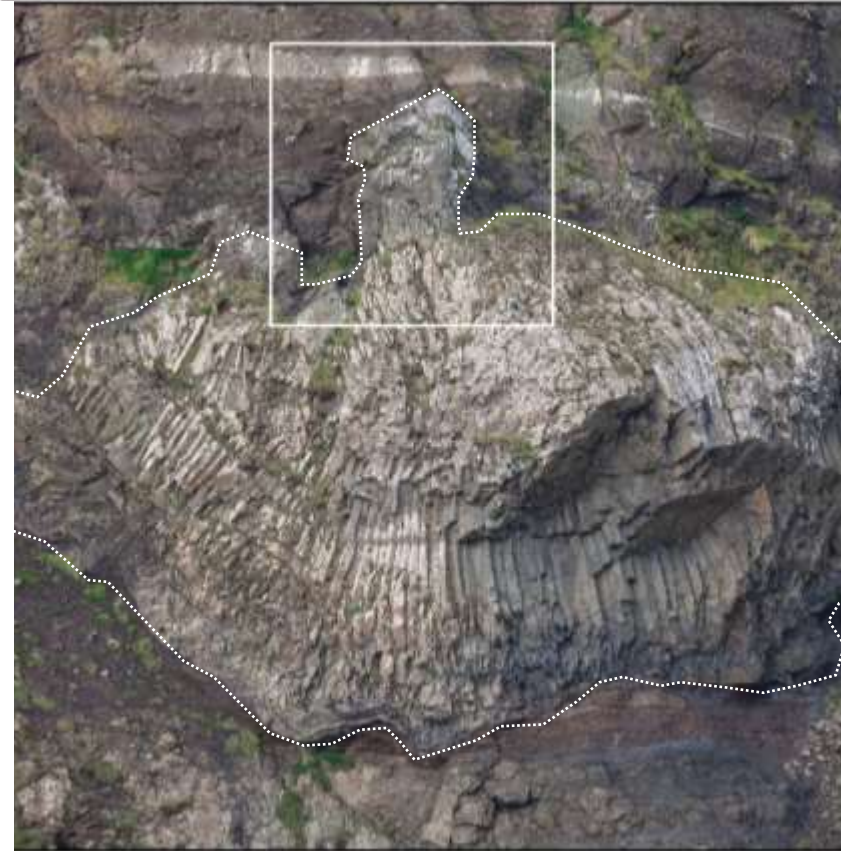
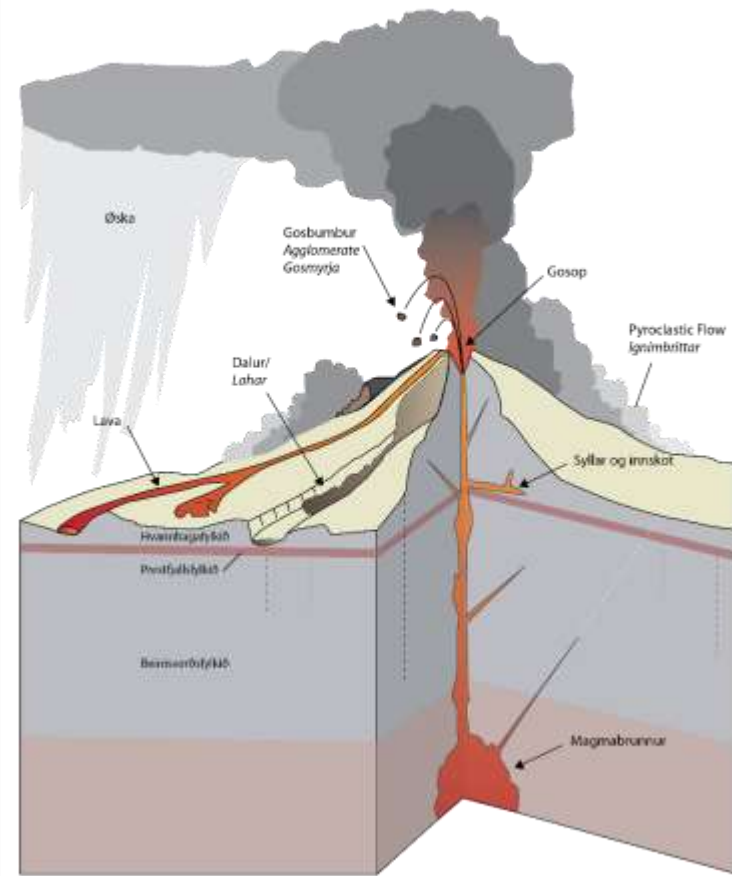


Gosfjallið

Lavafláir

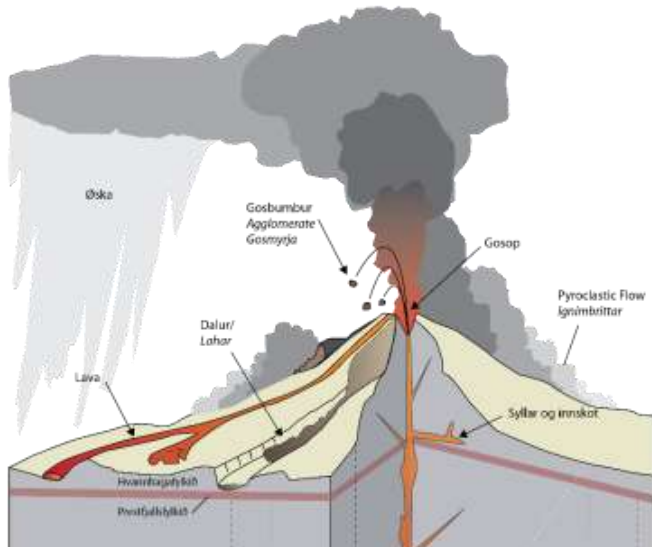


# – Óreglulig innskot, syllar, Olivin-ítinnut grót



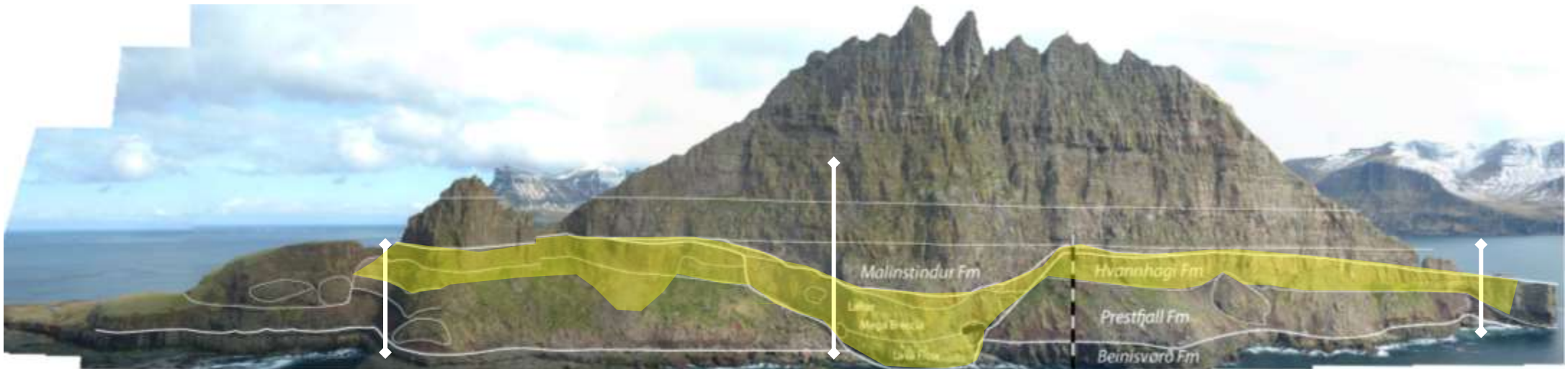
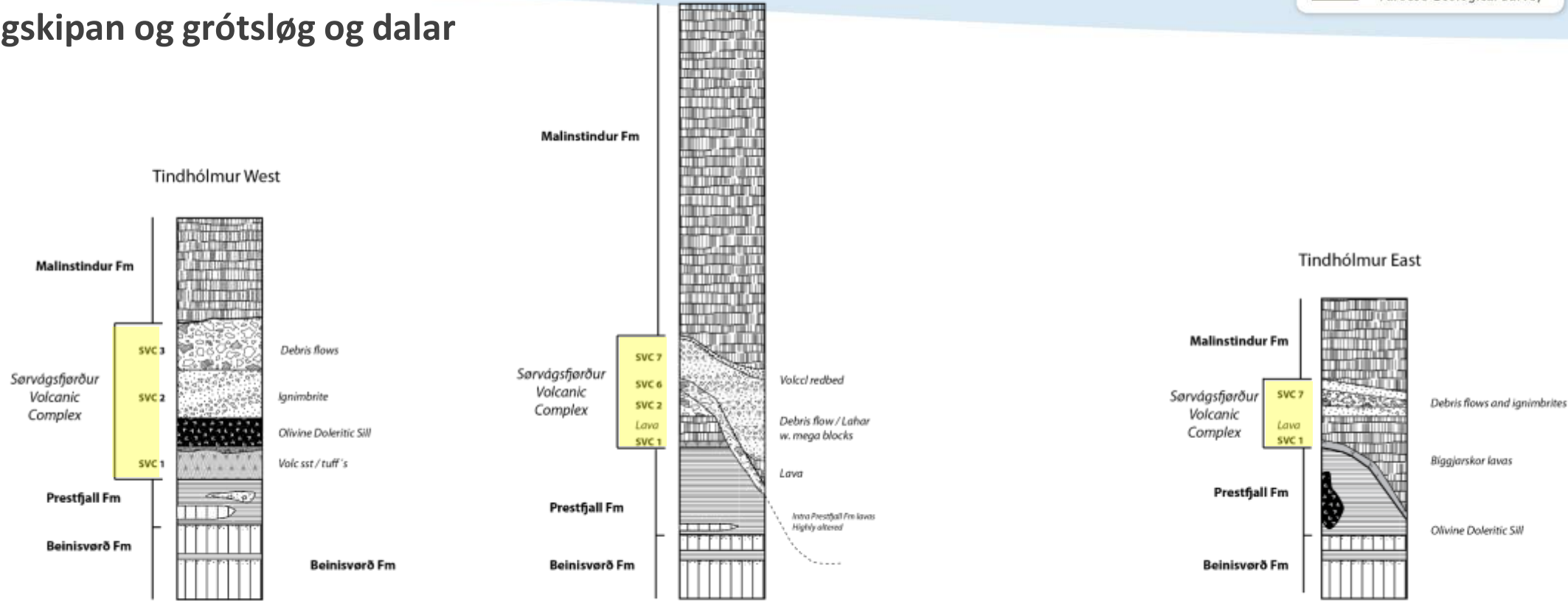


# Grótsløg og fláabygnaður : SVC ) – Óreglulig innskot, syllar, goshálsar, Olivin-ítinnut grót



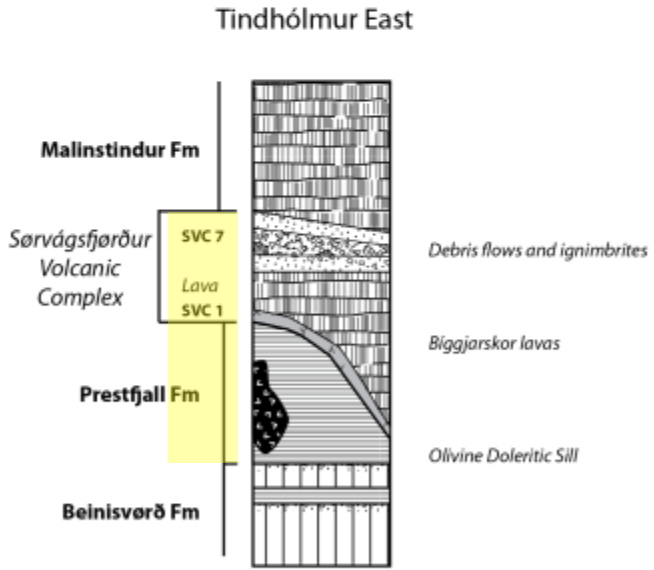


# Tindhólmur – lagskipan og grótsløg og dalar



# Grótsløg og fláabygnaður : SVC 1 og lavafláir

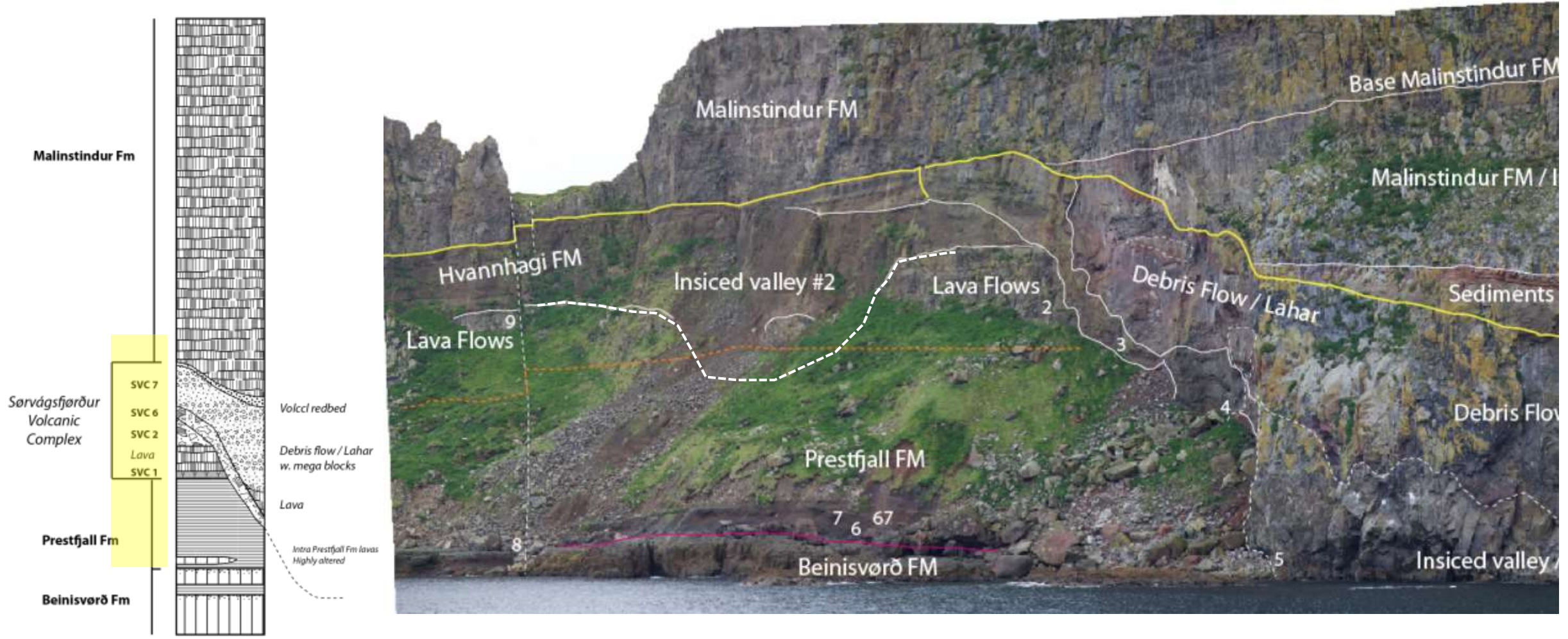
## Dalur #1 – máar niður í Prestfjallsfylkið, fylltur við lavafláum, líka sum Malinstindsfylkið





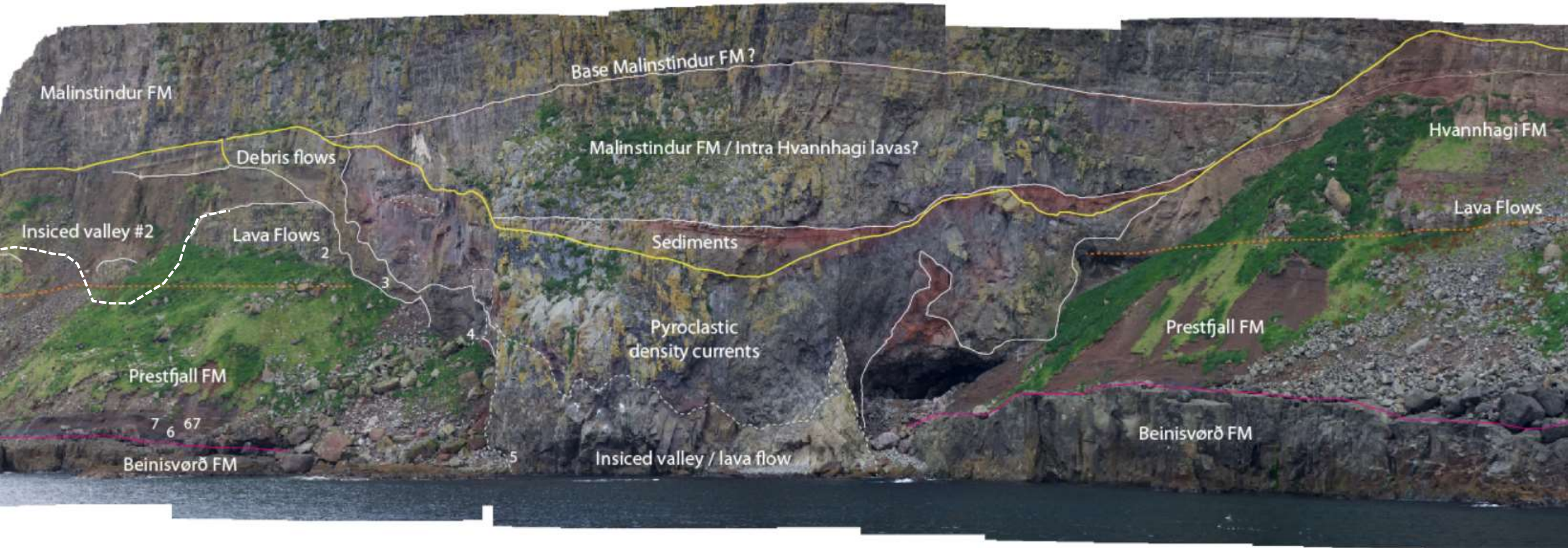
# Dalur #2 – máar niður í Prestfjallsfylkið, fylltur við “debris flows”

Tindhólmur Central



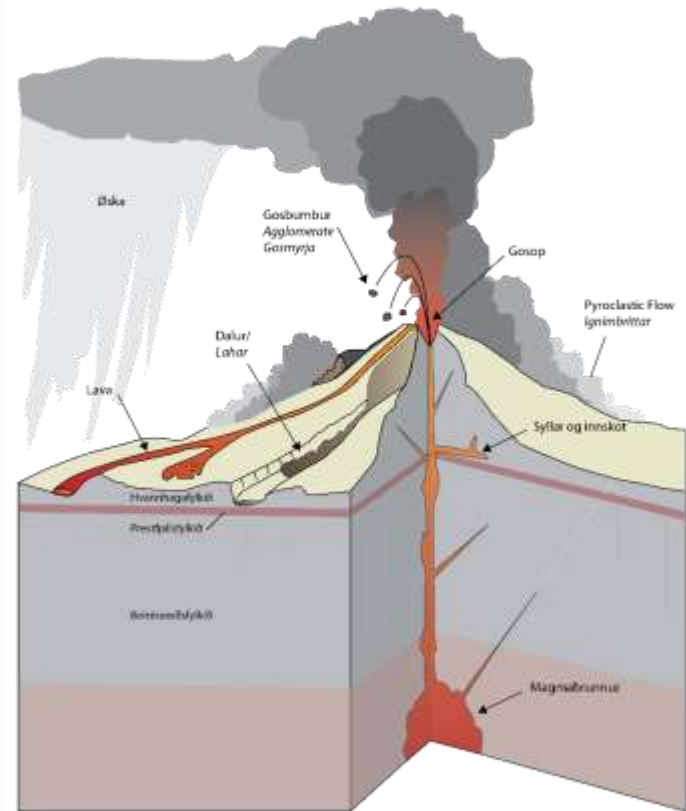


**Dalur #3 – máar niður í Prestfjallsfylkið, fylltur við lava, “debris flows” og seinast eisini pyroclastic flows (ignimbrittar).**





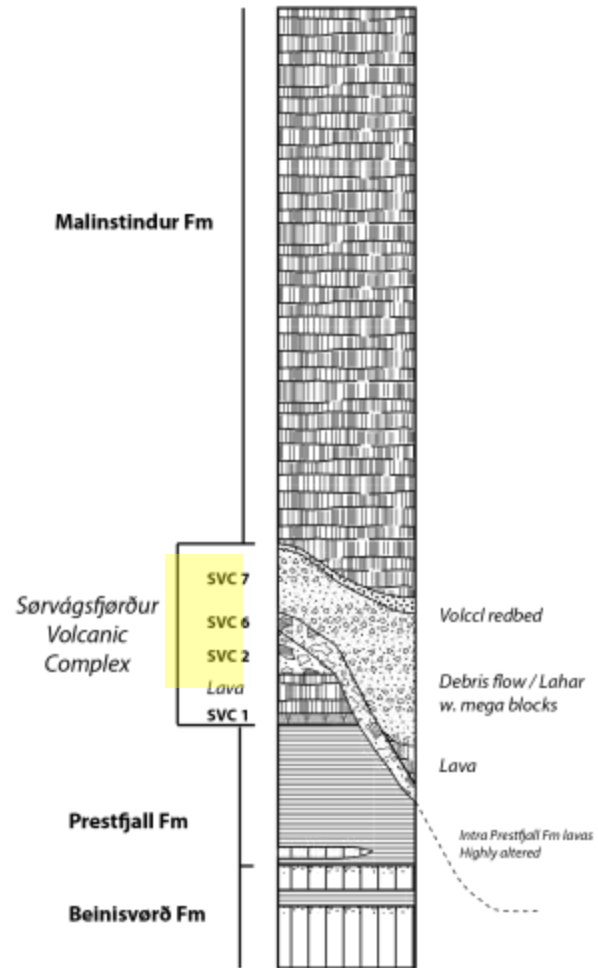
### Dalur #3 – Týðiligt fláamark, basalt lavafláir fylla botnin av hesum risastóra dali





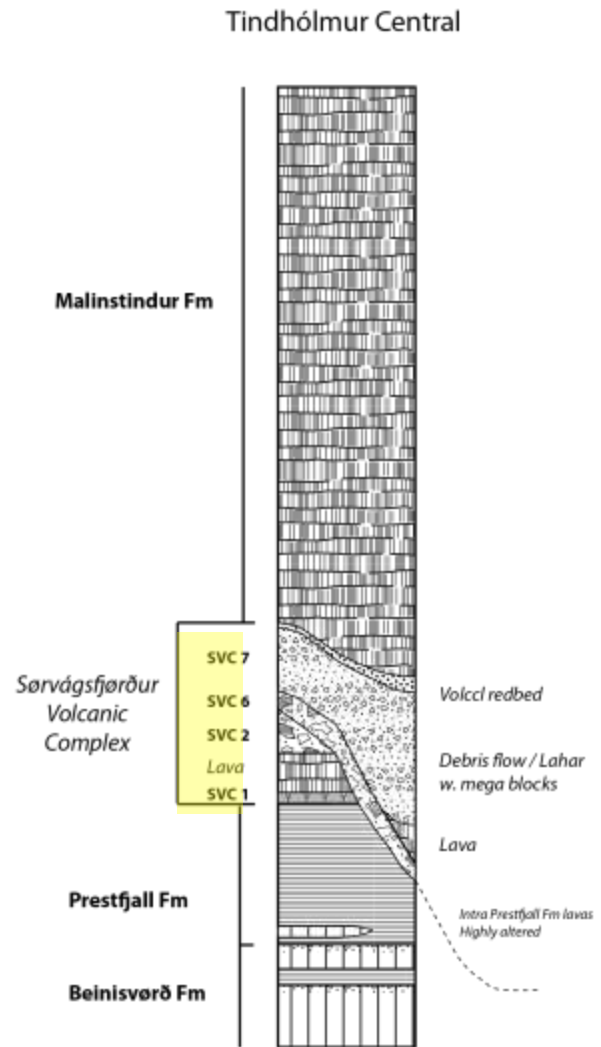
# Dalur #3 – Týðiligt fláamark, stórt og blandað grót fyllir dalin (mega blocks)

Tindhólmur Central



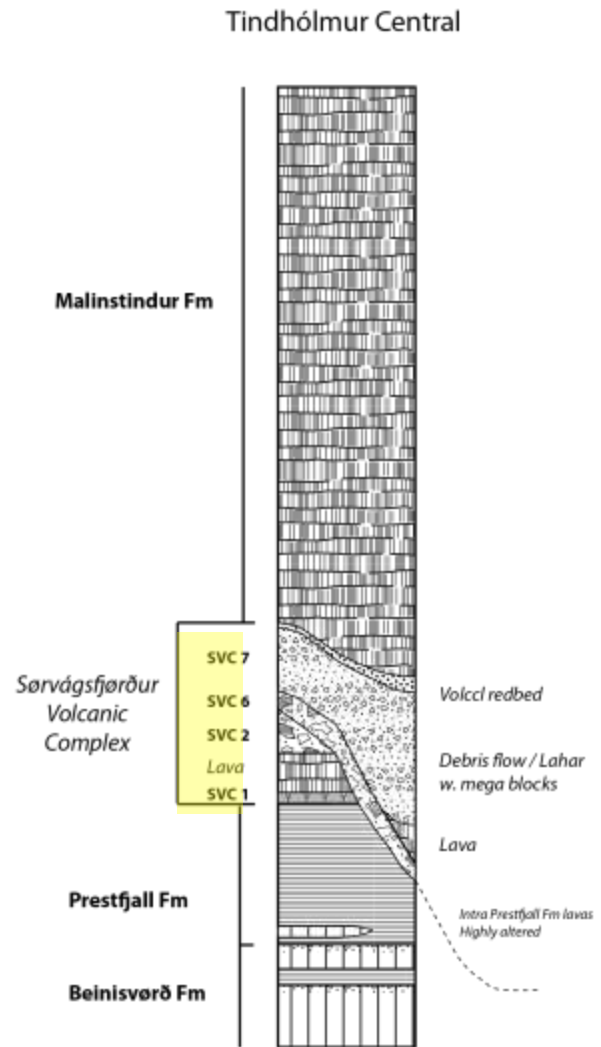


## Dalur #3 – Týðiligt fláamark, stórt og blandað grót fyllir dalin (mega blocks)





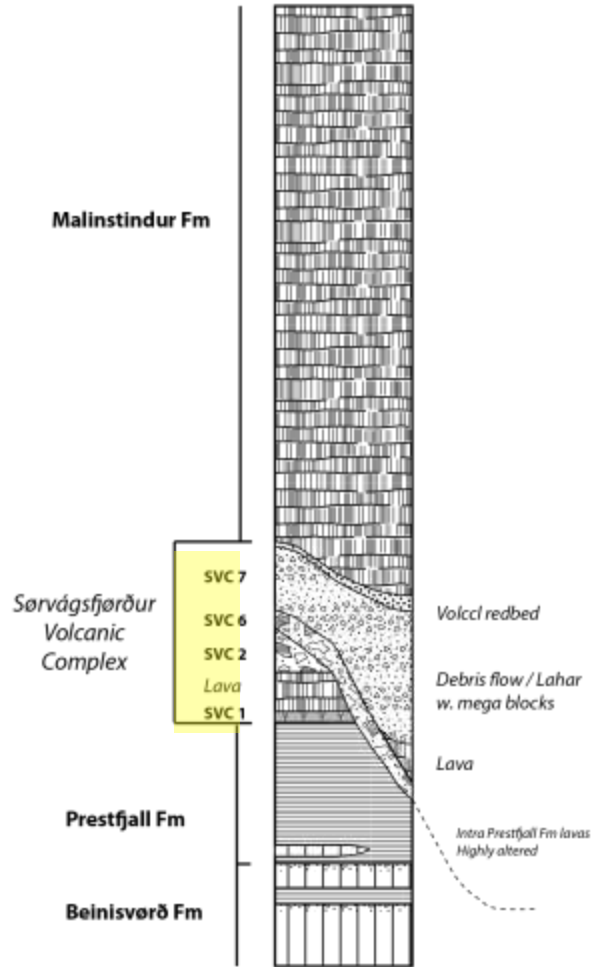
## Dalur #3 – Týðiligt fláamark, stórt og blandað grót fyllir dalin (mega blocks)





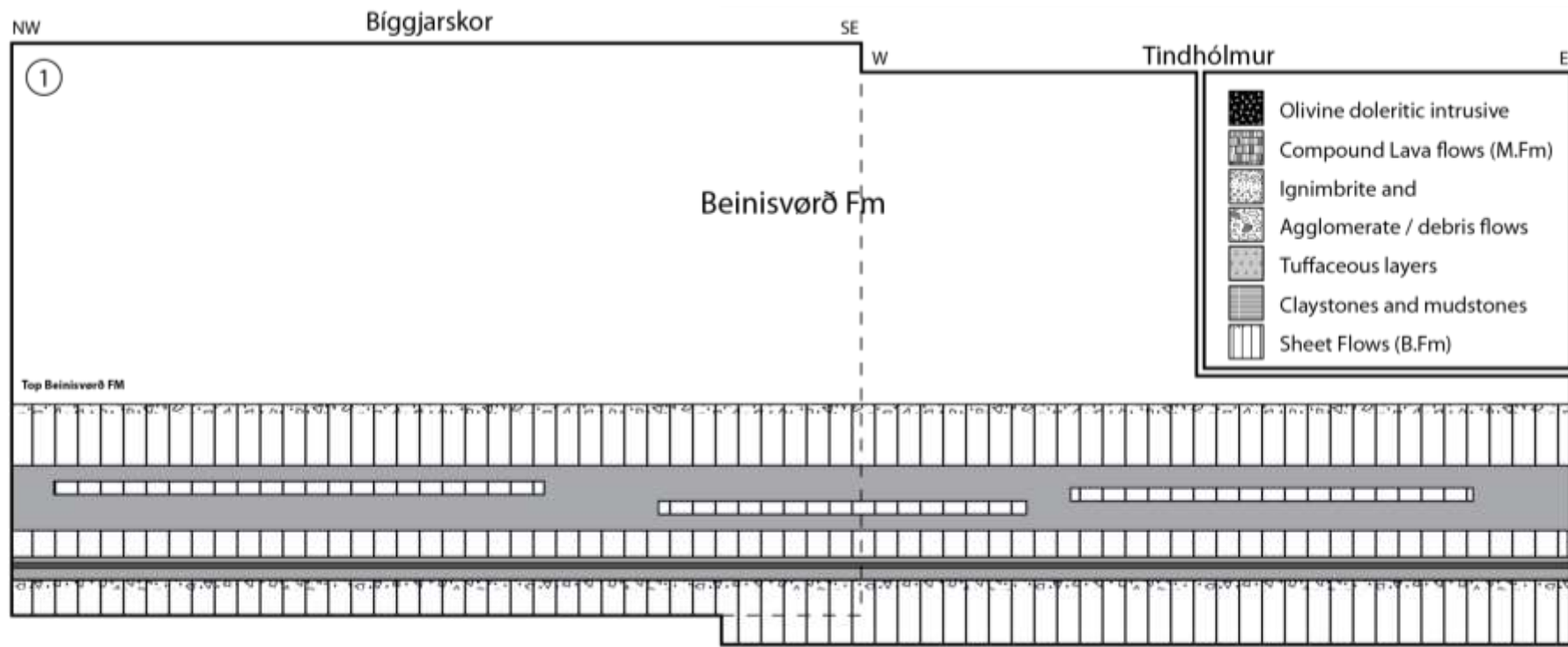
# Dalur #3 – Taka royndir av ignimbritt-eindini í dalinum

Tindhólmur Central

















# Jarðfrøðiligt modell: Bíggjarskor og Tindhólmur

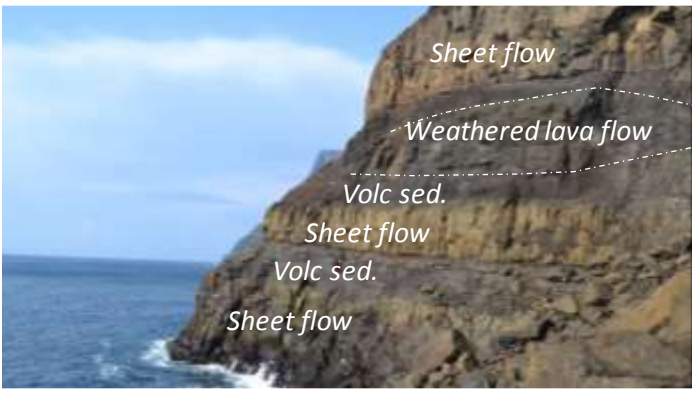
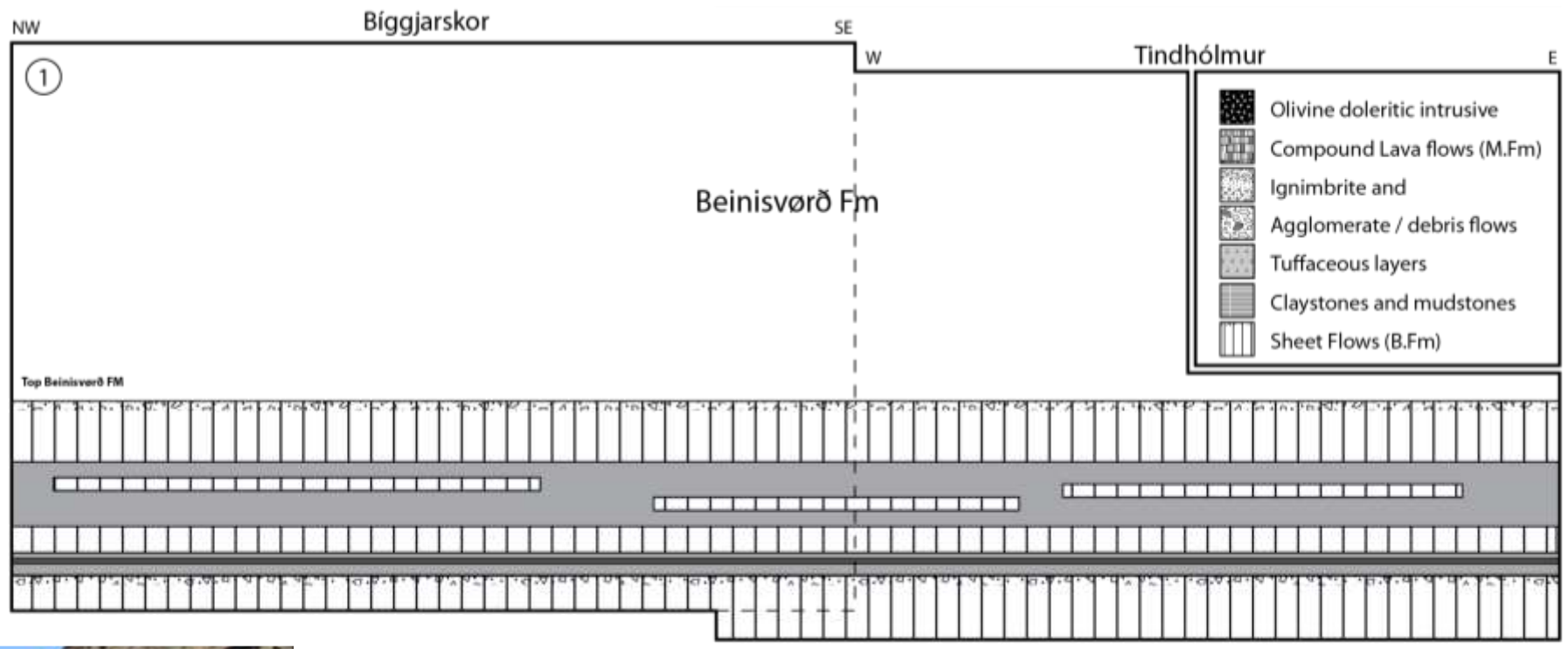




# Jarðfrøðiligt modell: Partur 1 – Seinasti parturin av Beinivørðsfylkinum

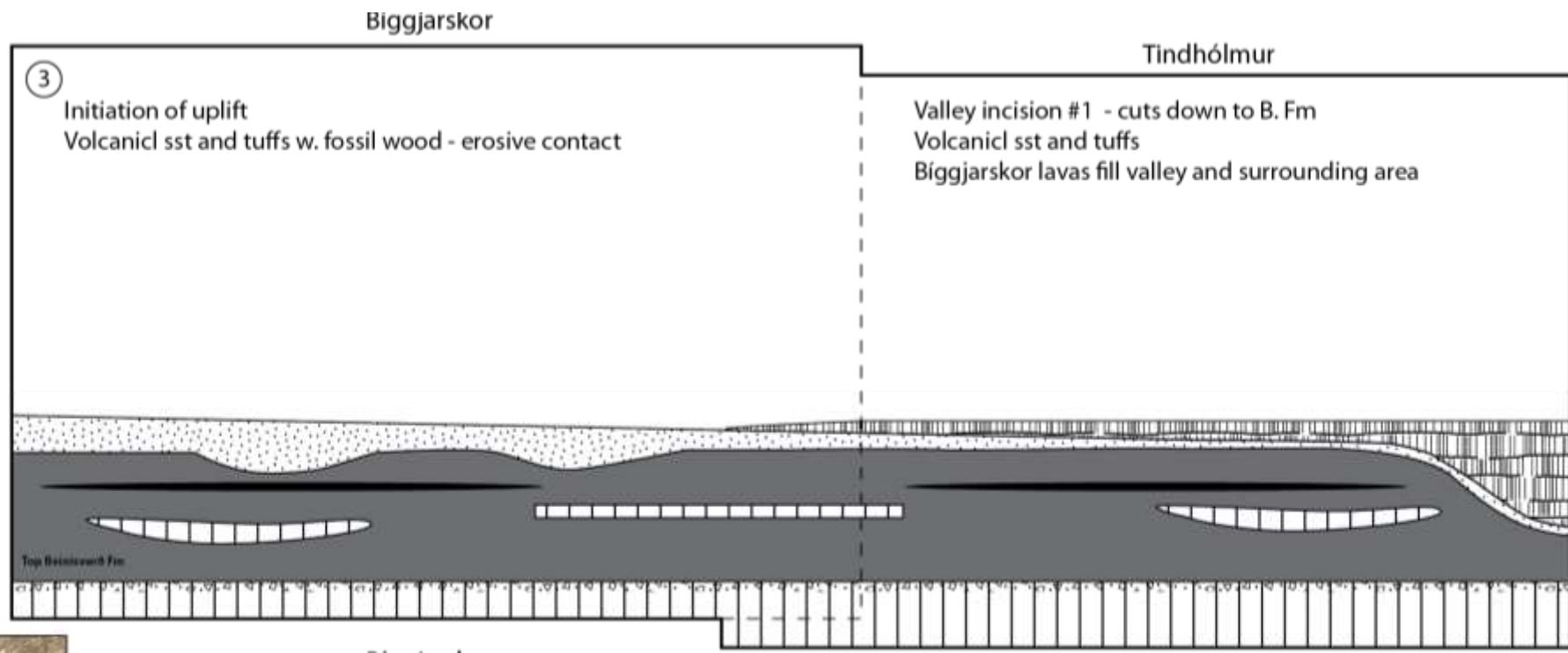
-  Olivine doleritic intrusive
-  Compound Lava flows (M.Fm)
-  Ignimbrite and Agglomerate / debris flows
-  Tuffaceous layers
-  Claystones and mudstones
-  Sheet Flows (B.Fm)







-  Olivine doleritic intrusive
-  Compound Lava flows (M.Fm)
-  Ignimbrite and Agglomerate / debris flows
-  Tuffaceous layers
-  Claystones and mudstones
-  Sheet Flows (B.Fm)

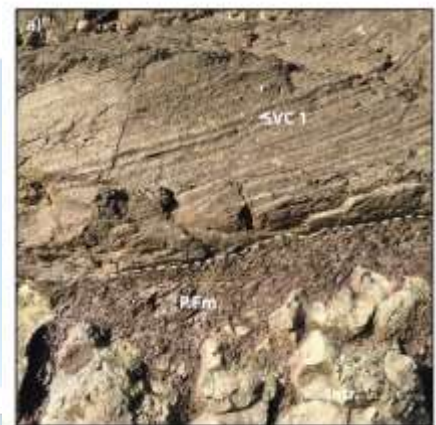




# Jarðfrøðiligt modell: Partur 2 – Gosmolagrót og øskuløg, dalur #1

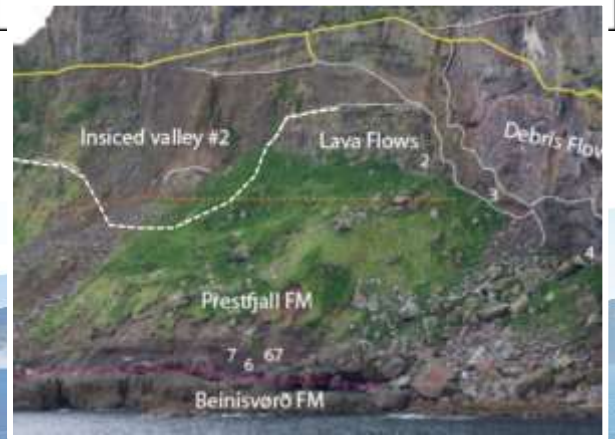
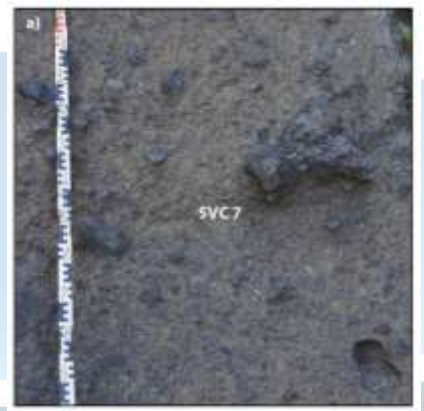
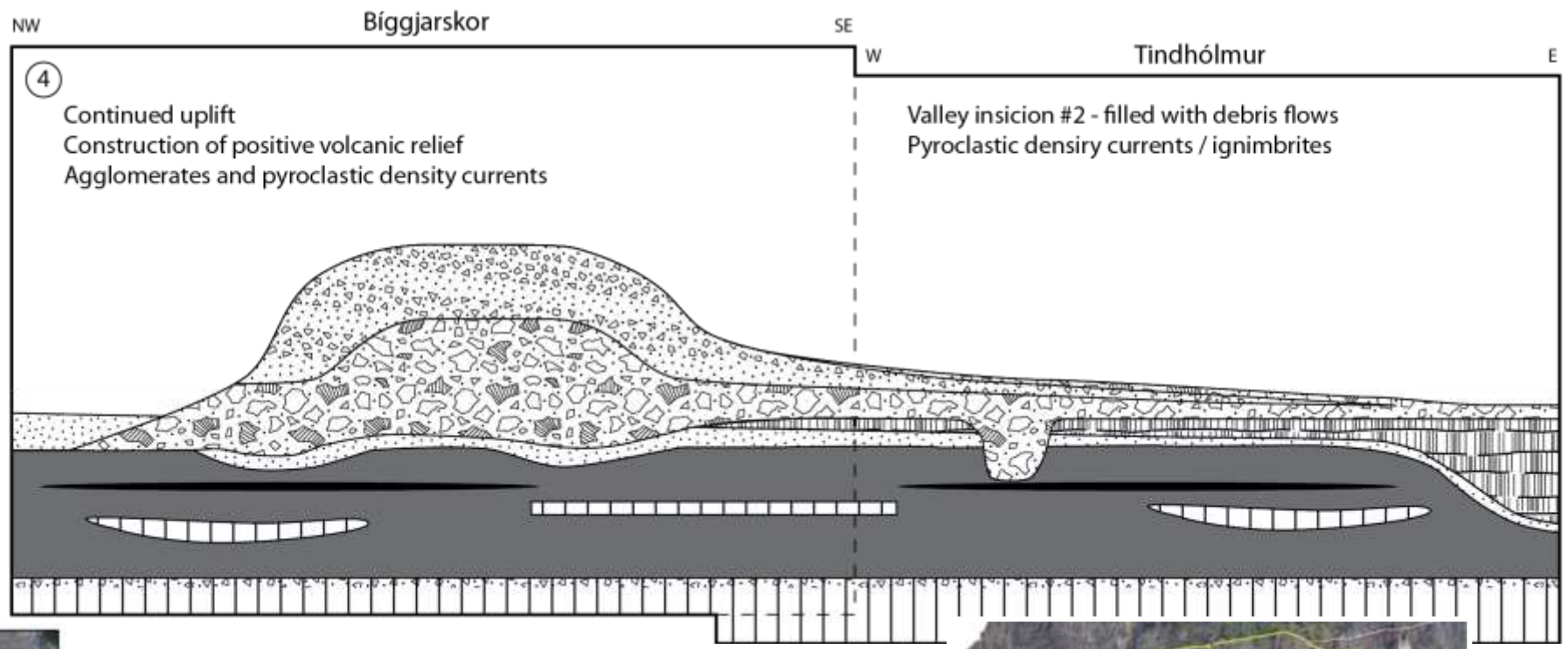


-  Olivine doleritic intrusive
-  Compound Lava flows (M.Fm)
-  Ignimbrite and Agglomerate / debris flows
-  Tuffaceous layers
-  Claystones and mudstones
-  Sheet Flows (B.Fm)



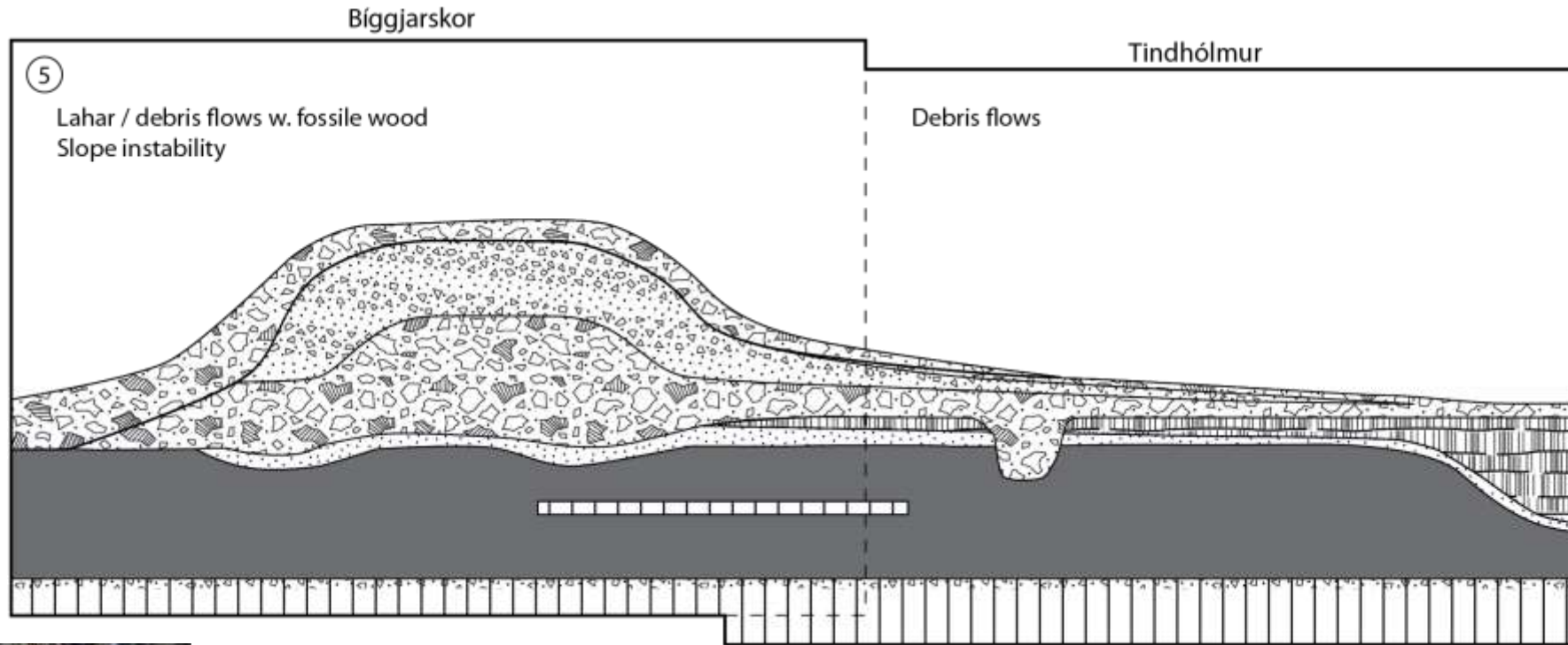









# Jarðfrøðiligt modell: Partur 3 – Gosmyrja, gosfjallið tekur skap Dalur #2





# Jarðfrøðiligt modell: Partur 4 – Lahar og debris flows, og niðurtærd fløta

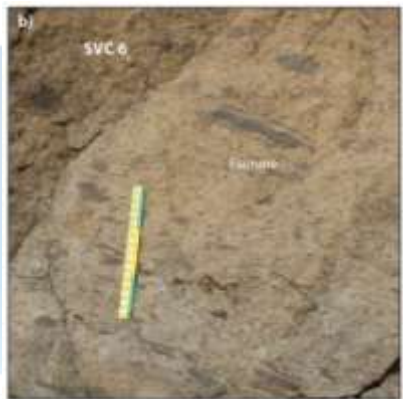
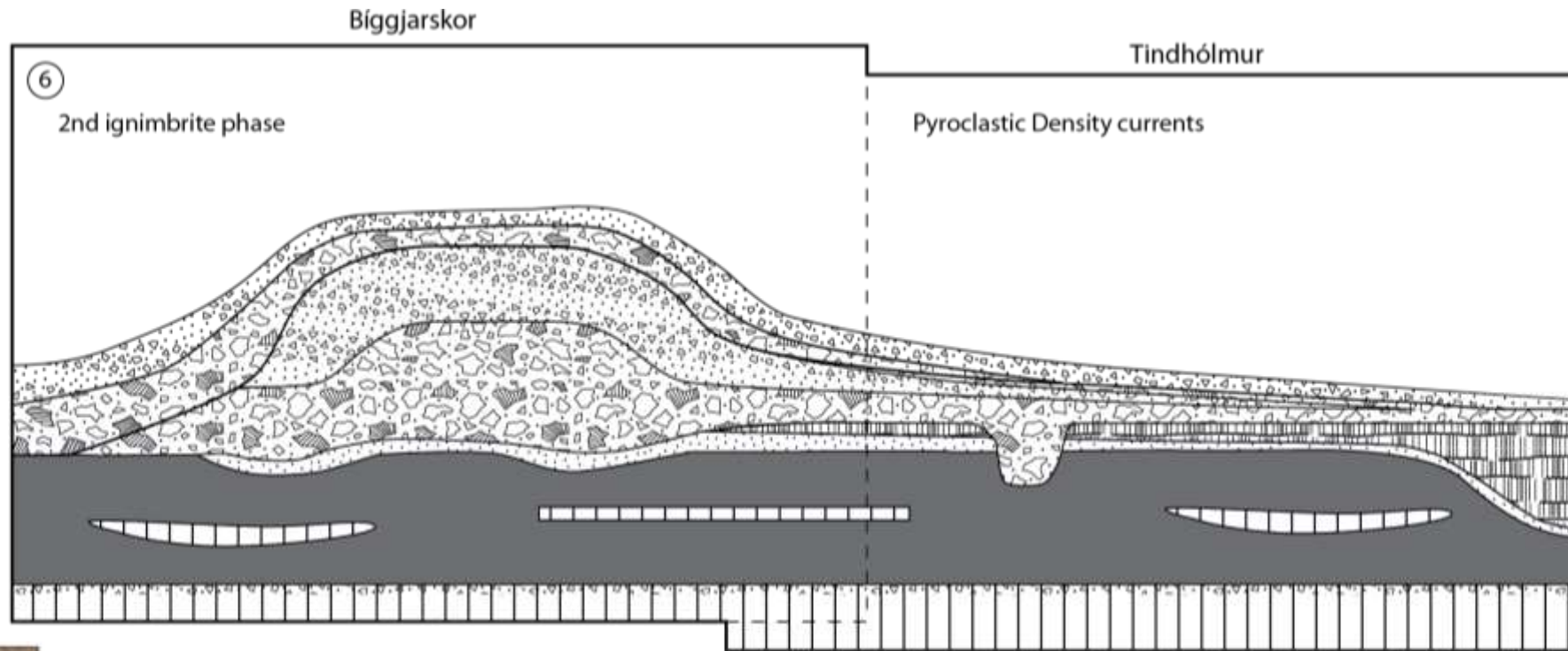


-  Olivine doleritic intrusive
-  Compound Lava flows (M.Fm)
-  Ignimbrite and
-  Agglomerate / debris flows
-  Tuffaceous layers
-  Claystones and mudstones
-  Sheet Flows (B.Fm)





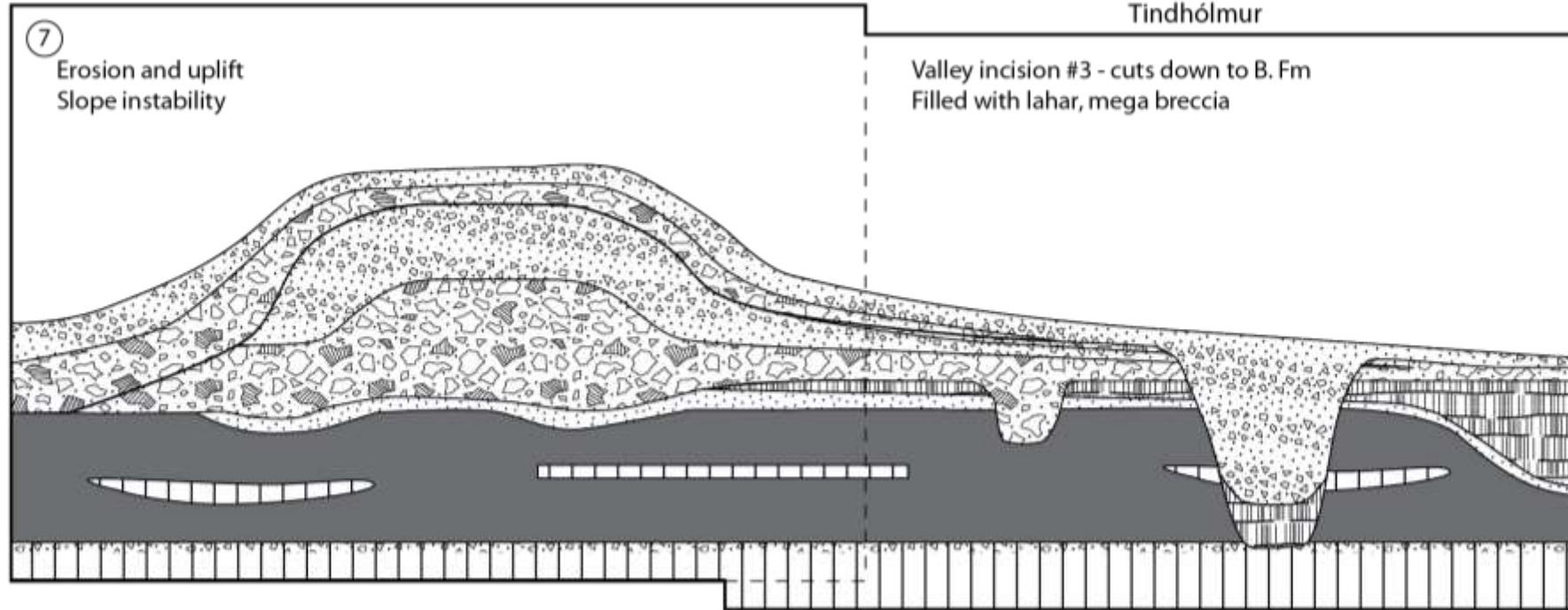
# Jarðfrøðiligt modell: Partur 5 – Onnur ignimbritt fasan



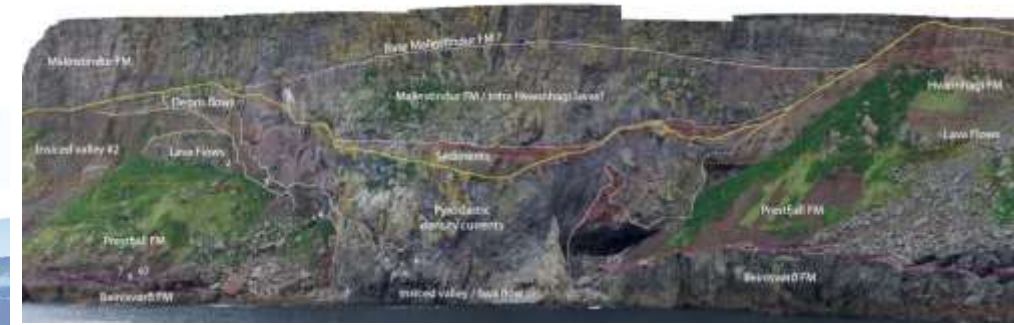
# Jarðfrøðiligt modell: Partur 6 – Niðurbróting, máan og dalur #3

Bíggjarskor

Tindhólmur

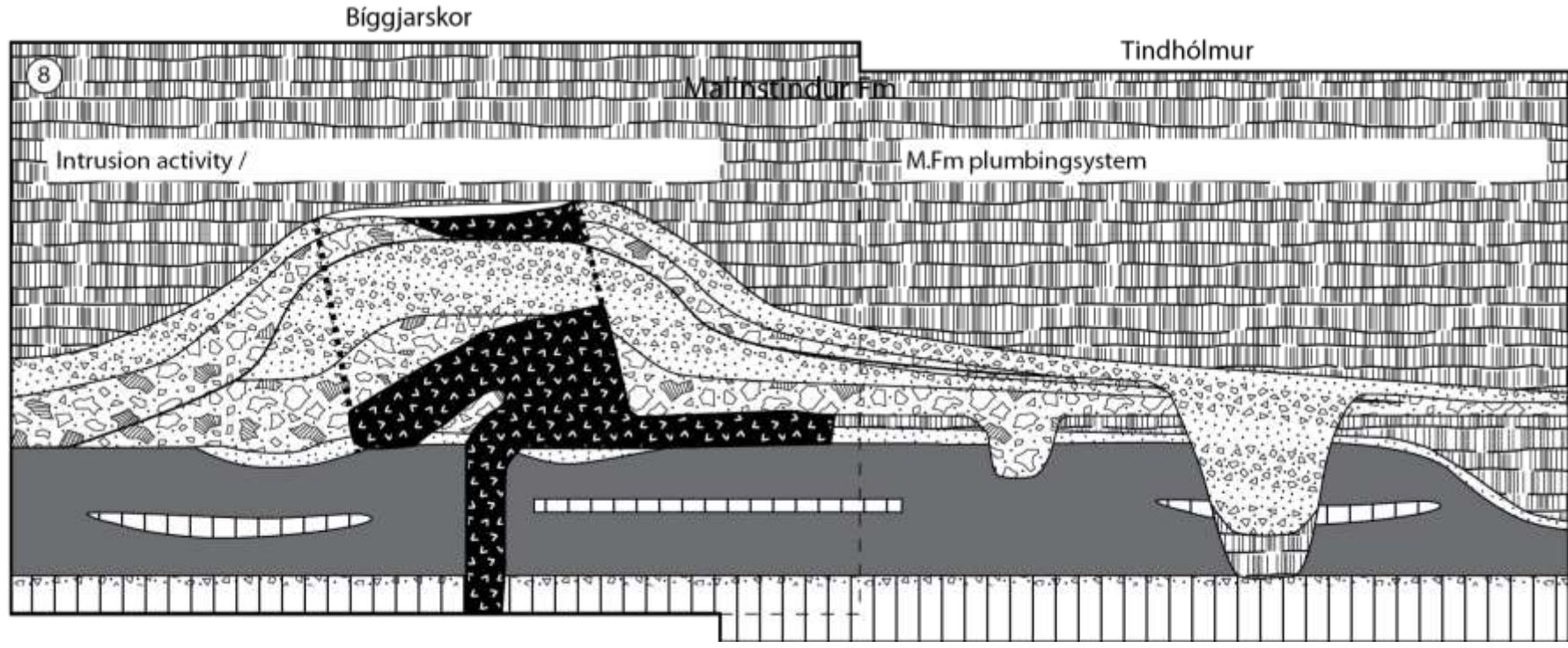


- Olivine doleritic intrusive
- Compound Lava flows (M.Fm)
- Ignimbrite and Agglomerate / debris flows
- Tuffaceous layers
- Claystones and mudstones
- Sheet Flows (B.Fm)

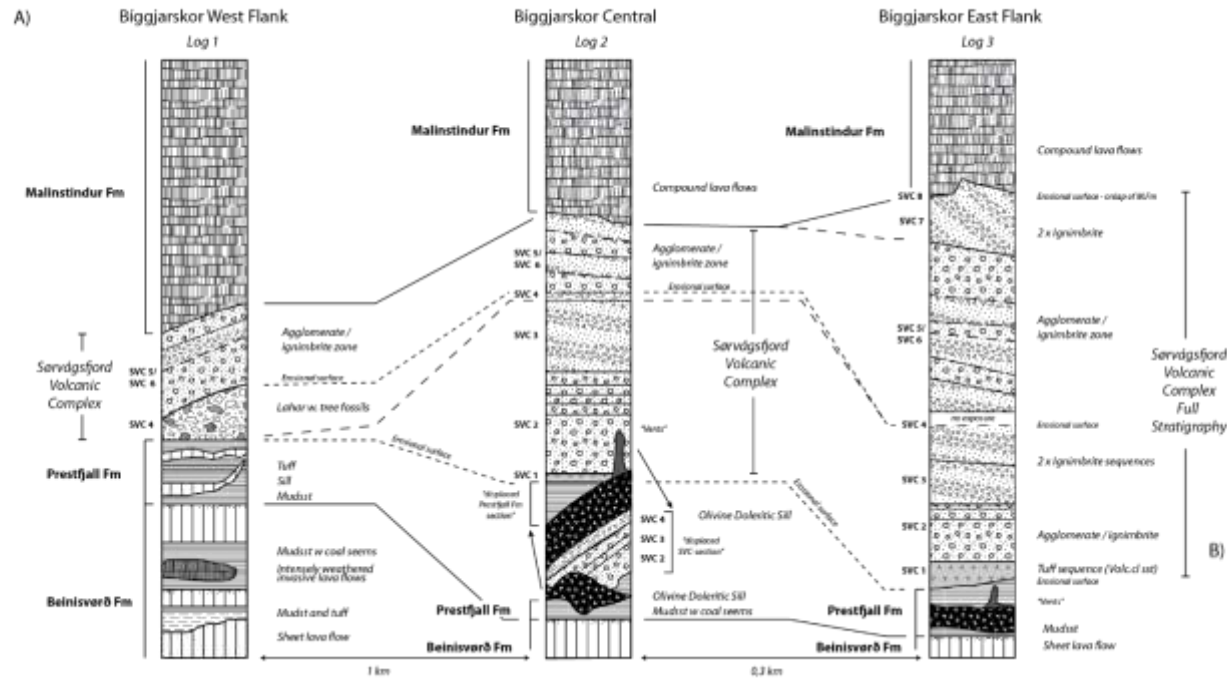




# Jarðfrøðiligt modell: Partur 7 – Innskot og Malinstindsfylkið leggur gosfjallið undir í lavafláum



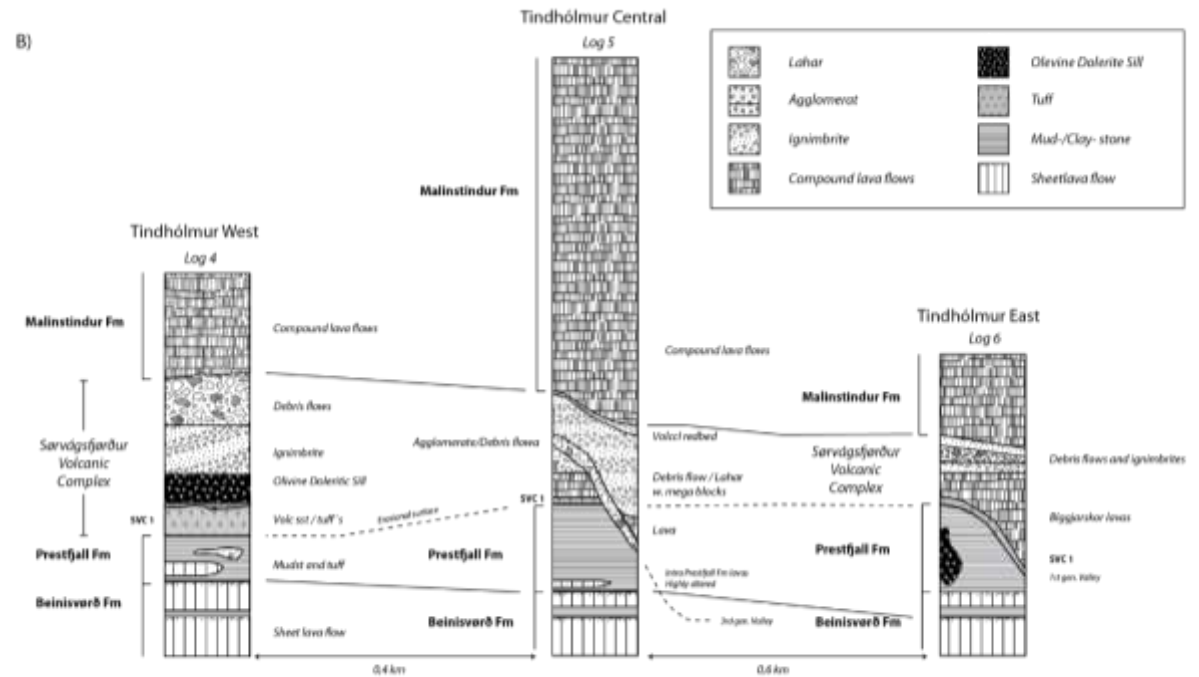
# Lagskipan fyri Bíggjarskor og Tindhólm



## Bíggjarskor Profile



B)



## Tindhólmur Profile



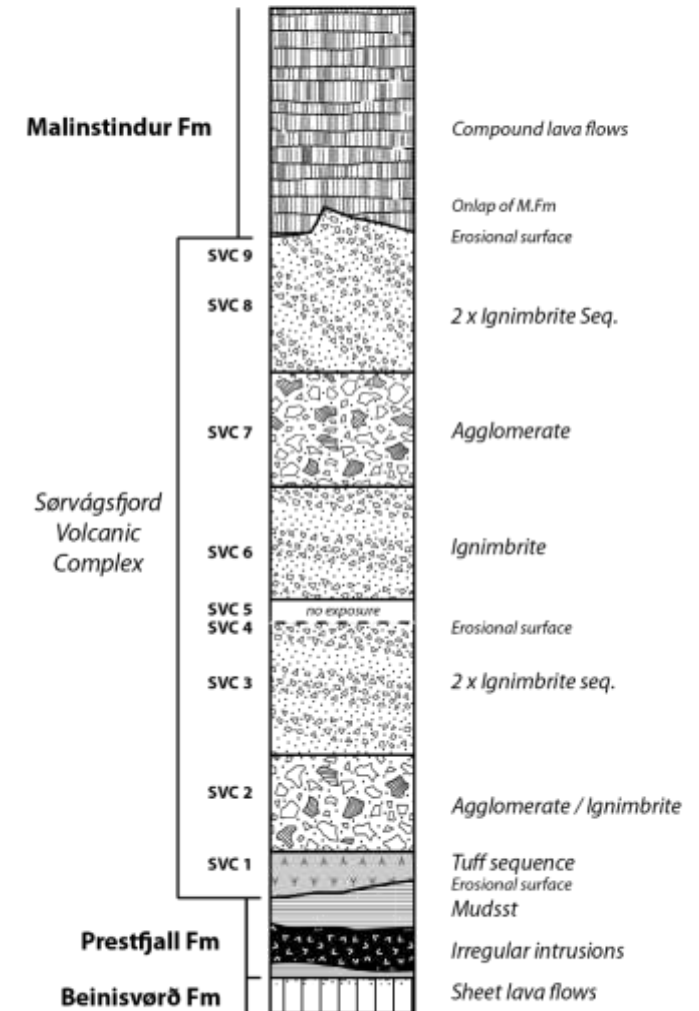


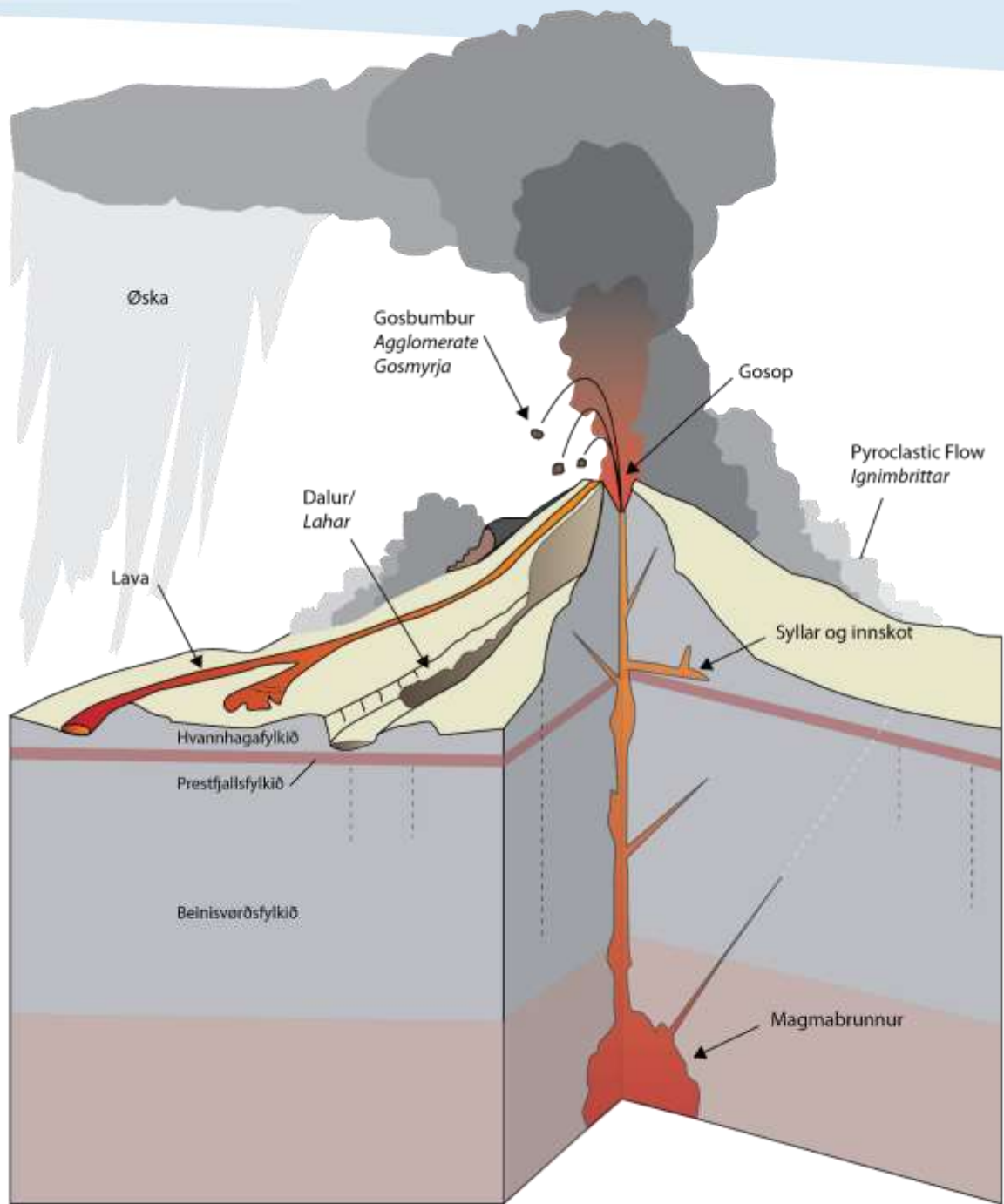
# Niðurstøður frá arbeiðinum

- The Sørvágsfjørður Volcanic Complex
  - Leivdir av 1,5km x 150m stórum gosfjalli (í minsta lagi)
  - Øll eyðkend grótsløf frá einum gosfjalli eru til staðar
  - Vit hava navngivið hetta **Sørvágsfjørður Volcanic Complex**
  - Gosvirksemi á sama stað við fleiri ymsum tíðarbilum, fleiri “fasir”
  - Fleiri ymisk sløg av basaltiskari lava

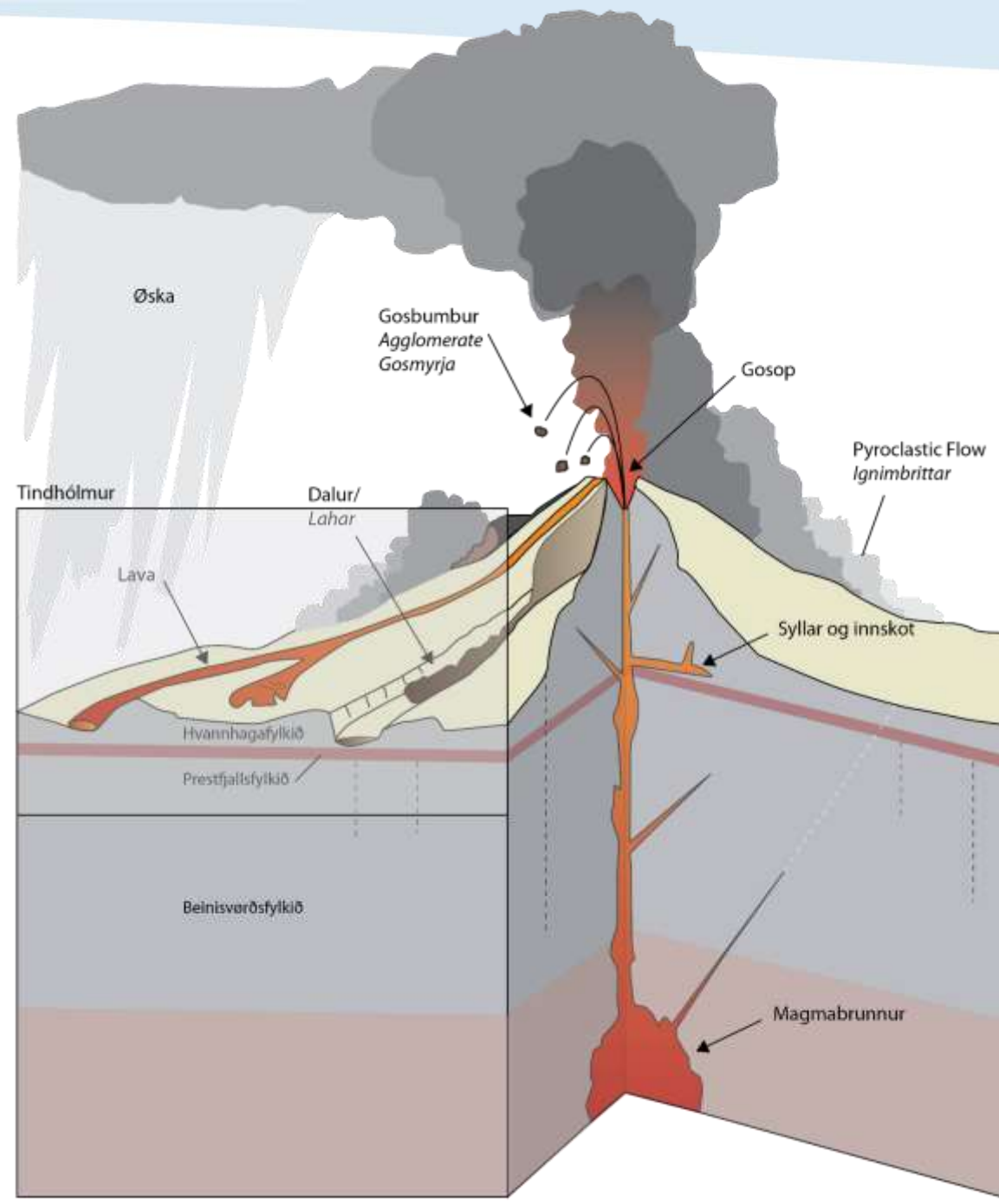


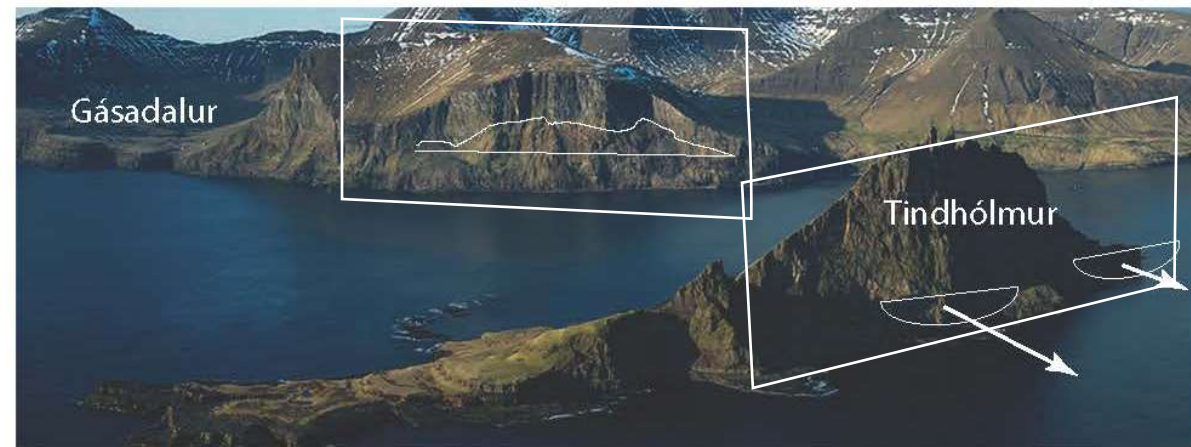
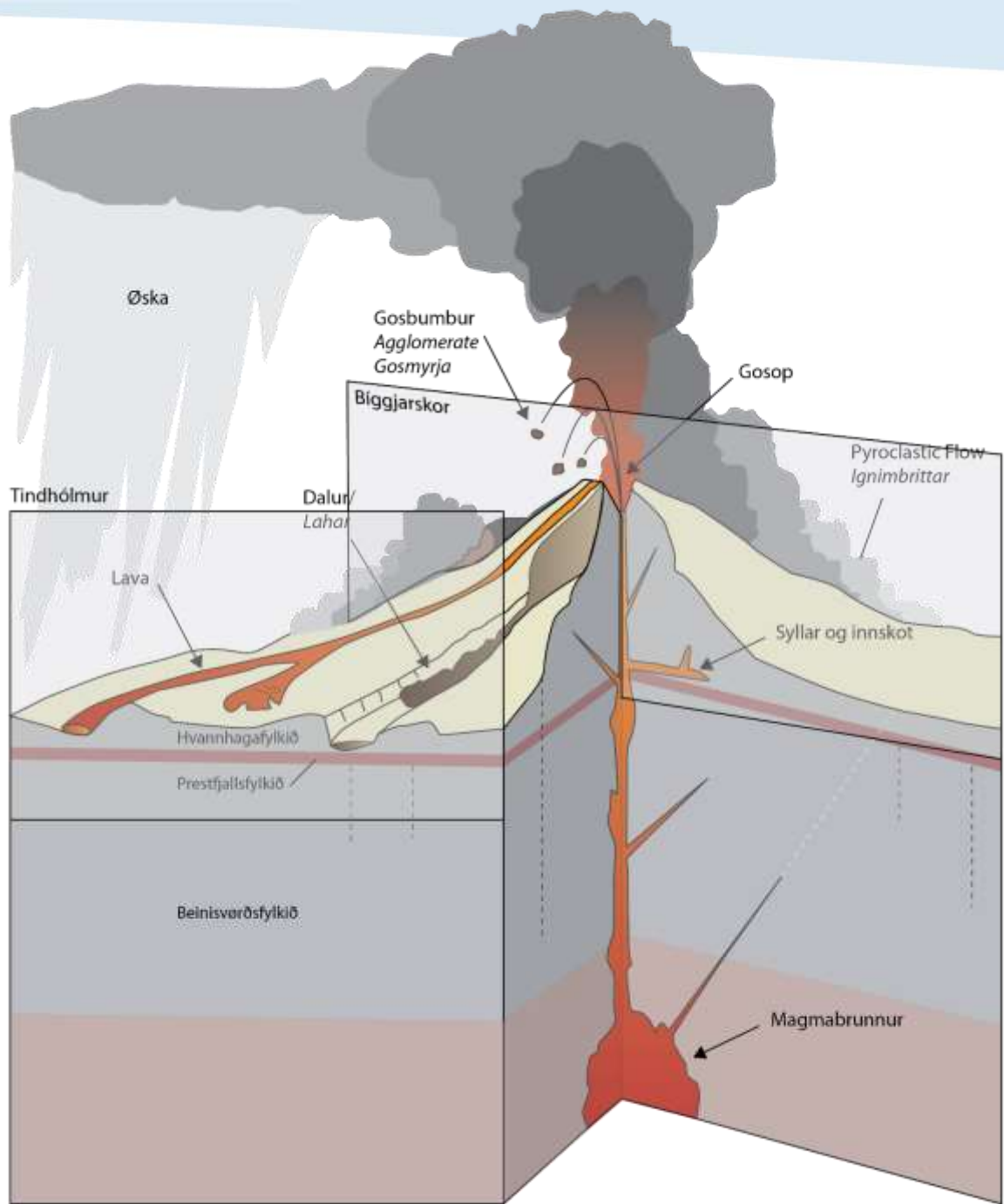
Main Bíggjarskor Profile





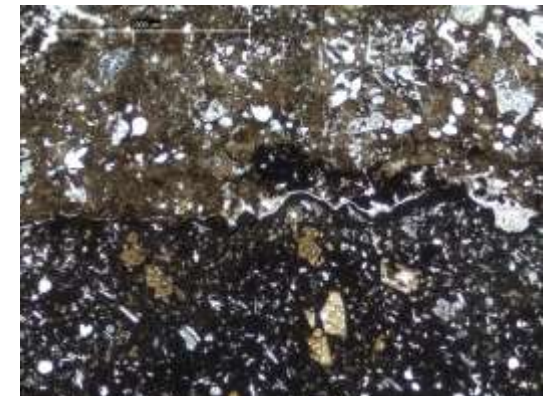
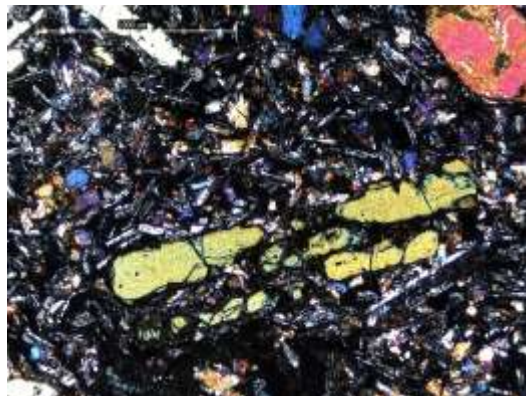
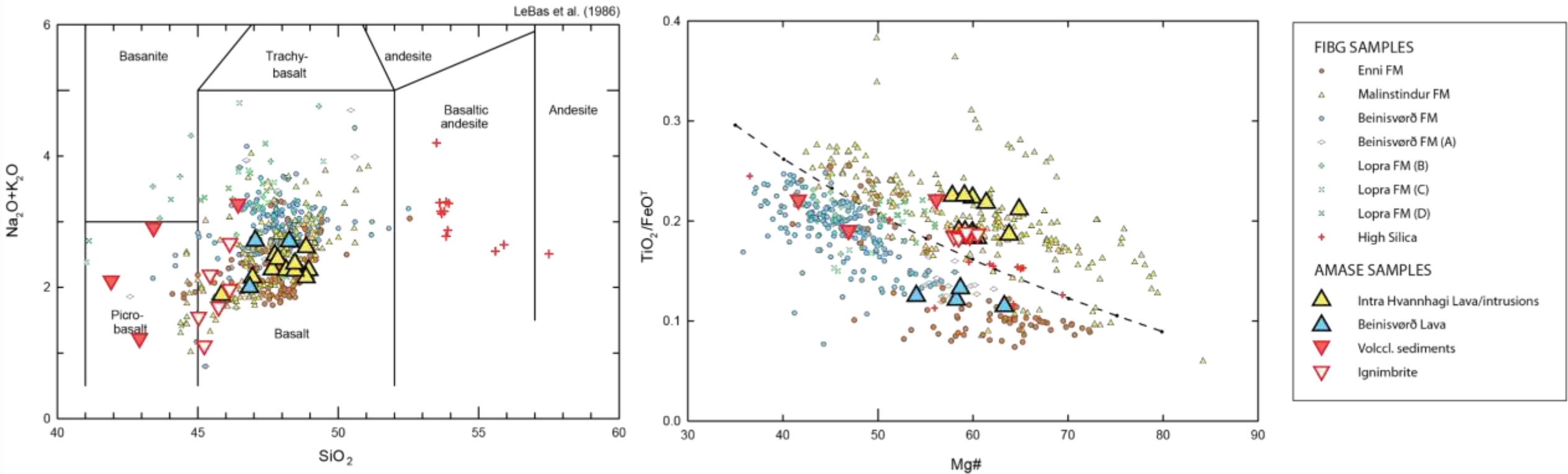









# Víðari gransking av gosfjallinum, jarðevnafrøði og annað





A scenic view of a black wooden cabin with a grass roof on a cliff overlooking the ocean. In the foreground, three people are sitting on a wooden deck, looking at a laptop. The cabin has a white chimney. The background features a large body of water and a massive, flat-topped mountain range under a blue sky with light clouds.

Takk fyri áhugan!