

## Nordic Geological Winter Meeting 2022

**West Iceland – Borgarfjörður – Snæfellsnes peninsula 14-16<sup>th</sup> of May, in combination with the 1 day NORDQUA excursion.**

### **Day 1, Late Glacial glaciotectonics and marine limit shorelines of the Lower Borgarfjörður region (The NORDQUA excursion)**

Guides:

Ívar Örn Benediktsson, University of Iceland

Þorbjörg Sigfúsdóttir, Iceland Met Office

The Lower Borgarfjörður region in West Iceland has been key for understanding the deglaciation of Iceland and the collapse of the Iceland Ice Sheet in Bølling times, as well as for deciphering Younger Dryas and Early Holocene (Preboreal) glacier dynamics. The excursion will visit marine limit shorelines and deltas in Akrafjall and Skorradalur, the spectacular Skorholtsmelar end-moraine complex, and the glaciotectonics of the Melabakkar-Ásbakkar coastal cliffs.



Overnight stay at Reykholt, the home of Snorri Sturluson in the thirteenth century for the participants for the 3 days excursion.

### **Day 2, Structure and Geothermal activity of the Borgarfjörður region**

Guides:

Páll Einarsson, University of Iceland

Hafþís Eygló Jónsdóttir, Icelandic Road and Coastal Administration

The crust of the western part of the Borgarfjörður region was formed as a part of the Eurasia Plate 7-15 million years ago. The ridge jump around 7 ma to the present rift of the Western Volcanic Zone transferred this crustal block to the North America Plate. This crustal block has the structure of an antiform and is the scene of intraplate earthquakes and enhanced geothermal activity. We visit key sites of this story, the Deildartunguhver hot spring, Húsafell central volcano, Grábrók cinder cone, Gljúfurá gorge, Gerðuberg columnar basalt and Hellnahraun and Búðarhraun lava fields.

Overnight stay at Fosshotel Hellnar

### **Day 3, *The Snæfellsnes Volcanic Zone, structure, and volcanology***

The intraplate, active Snæfellsnes Volcanic Zone sits unconformably on top of Tertiary crust. Three volcanic systems have been active in the Holocene: The Ljósufjöll, Lýsuhóll, and Snæfellsjökull volcanic systems. Our stops include Berserkjahraun lava field, Saxhóll cinder cone, Lóndrangar plug, Búlandshöfði interglacial sediment sequence, Vatnshellir lava tube Snæfellsjökull National Park Headquarters, and the eruption site of the latest eruption, Rauðhálzar, active in the settlement period of Iceland.



Arrival in Reykjavík in the evening.