WESTERN MINERALS, INC.
Elsah, Illinois

ICELAND POST-GLACIAL VOLCANICS

Introduction

Dr. S. Thorarinsson provided information about, and suggested collecting localities for, the Post-Glacial Volcanics. We did not get the rhyolite on Hecla nor the granophyre on the peninsula 150 Km. NNW of Reykjavik because the latter would have required a two day trip.

The great volcanic zone which bisects Iceland lies astride the mid-oceanic ridge. Dr. Thorarinsson has expressed the thought that the oceanic ridge may not be purely tectonic but is in part constructional.

A group of kodachrome slides is available to illustrate topographic features and petrological details.

References

Jakobsson, S. P., 1972, Chemistry and distribution pattern of recent basaltic rocks in Iceland; Mus. Nat. Hist. Reykjavik Misc. Papers # 61.

-------- 1968, The Lakagigar Eruption of 1783; Acta Naturalia Islandica v. II, # 8.

-------- 1966, The grimsnes Lavas SW Iceland; Acta Naturalia Islandica v. II, # 7.

-------- 1964, The Ankaramites of Hvammsmuli, Eyjafjöll, Southern Iceland; Acta Naturalia Islandica v. II # 4.

-------- 1970, Hecla. A notorious Volcano; Almenna Bökafelagid, Reykjavik.

Location and Description of Specimens

1. Vesicular basalt, 7 Km. S of Airport Highway about 6 Km. N og Grindurik (SW of Reykjavik).

2. Vesicular olivine basalt (pikrite), approx. 2.5 Km. E of Grindurik.

Missing 3. Scoria with phenocrysts from small cone 2 Km. E of road N. to Airport.

4. Vesicular gray basalt, top of Larghill shield volcano. This flow apparently extended from an upwelling which spread lava in all directions forming a shield. This, according to Icelandinc geologists, is the TYPE shield volcano which is very different in construction from Mono Loa on Hawaii.

5. Porphyritic tholeiite - a marginal facies of the Laki flow of 1783. See reference on the Lakagigar Eruption of 1783. This erruption lasted about 4 mounths and disgorged about 12.3 $Km.^3$ of lava covering 565 $Km.^2$ to qualify as the world's largest modern lava flow.

6. Transition alkali basalt. Hrifunes, Skafta River.

7. Porphyritic ankaramite, dark green facies. Quarry at roadside about 5 Km. W of Holt farm (45Km. W of Vik)

8. Palaginite breccia, about 6 Km. W of Vik.

9. Porphyritic ankaramite, light green facies, same locality as 7.

10. Basalt, one of the southern Hekla flows. NE of Ginnarsholt.

11. Porphyritic tholeiite, large plagioclase phenocrysts. 4 Km. S of new power station on Pjorsa River (NW of Hekla).

12. 1970 Hekla andesite flow, about 9 Km. E of power station.

missing

13. Pumice. Sorry they are so small, but that is the way it is. We expected to find larger fragments but the locality turned out to be heaps of quite fine pieces. Collected just W of power station but found all over lower flanks of Hekla on the northwest.

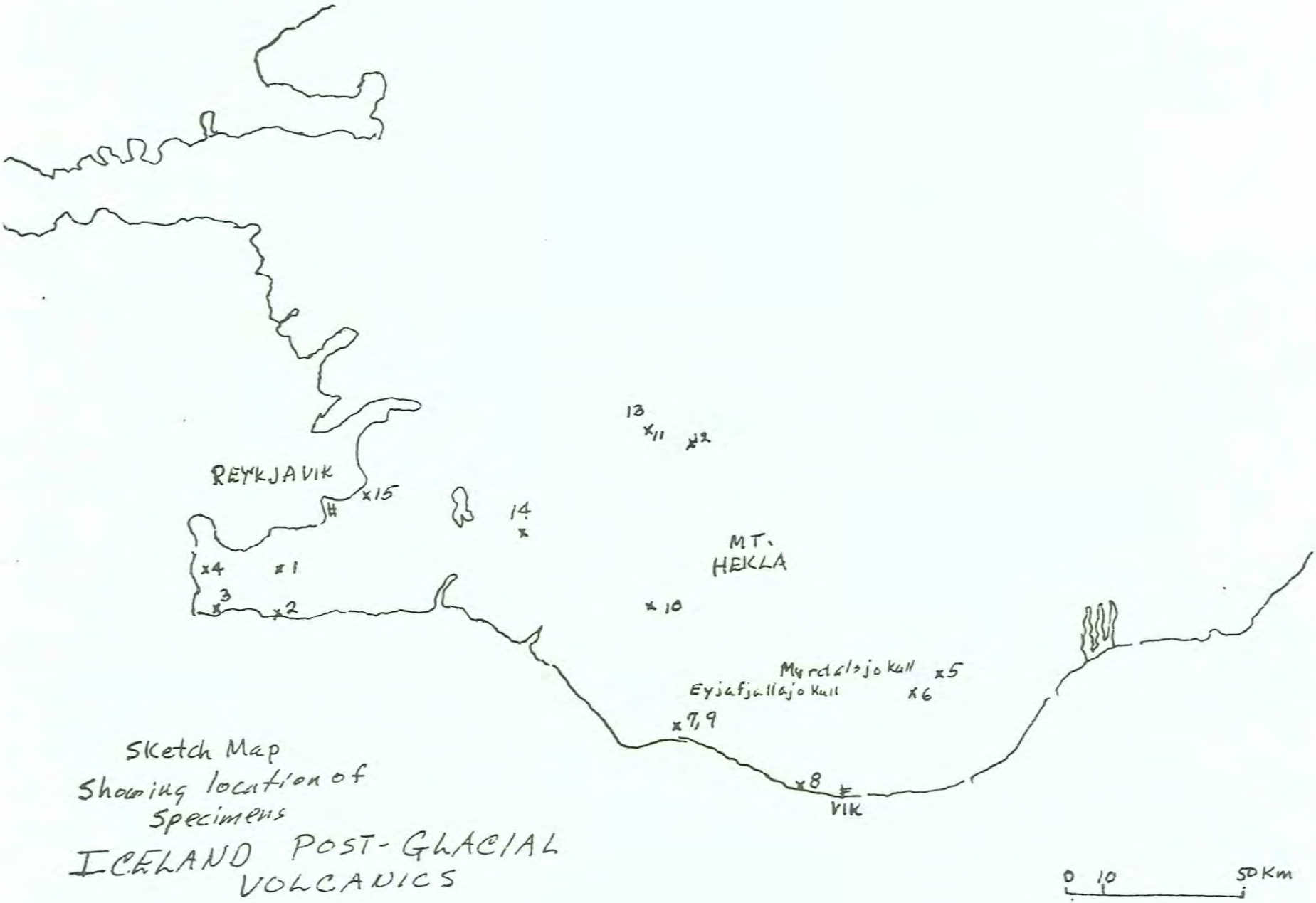
14. Tjarnarkolar lava. Sample from outcrop 250 m. W of southernmost Tjarnarkolar crater, Grimsnes area.

SiO_2	47.39	MgO	8.63	TiO_2	1.80
Al_2O_3	15.08	CaO	12.49	H_2O+	.11
Fe_2O_3	1.53	Na_2O	1.99	H_2O-	.04
FeO	10.30	K_2O	.32		
MnO	.18	P_2O_5	.22	Total	100.08

Ref. Jakobsson, 1966 Grimsnes Lavas p. 18.

15. Gray basalt, porphyritic. Quarry 5 Km. S of downtown Reykjavik.

February 1975



Sketch Map
Showing location of
Specimens

ICELAND POST-GLACIAL VOLCANICS