

Eruption of a New Shield Volcano

Questions:

1. How many coalescing volcanoes form the Big Island of Hawaii?
2. What is the East Rift Zone?
3. How and when did Mauna Ulu form?
4. What is the biggest topographic feature of the East Rift?
5. What causes gases emitted from the lava pond to be visible?
6. At what temperature do Kilauean basalts erupt?
7. What causes spattering activity to occur in the lava pond?
8. What conditions cause the lava pond to fill its crater?
9. How does most of the lava travel down slope from the lava pond?
10. What is the approximate velocity of lava flow in channels when they initially surface?
11. What factors affect the viscosity of lava?
12. What is the ratio of lava viscosity to water?
13. What conditions are required to transform pahoehoe lava to `a`a lava?
14. Why is the surface of a new shield volcano so complex?
15. What is the thickness of pahoehoe toes?
16. What causes the crinkling noise as distal pahoehoe toes are formed?
17. At what temperature does basaltic lava form a black skin?
18. What was the rate of eruption of basaltic lava from the lava shield in 1987?
19. Which type of lava flow occurs when the flow rate is very high?
20. What methods are being considered as means to prevent lava flows from moving to populated areas?