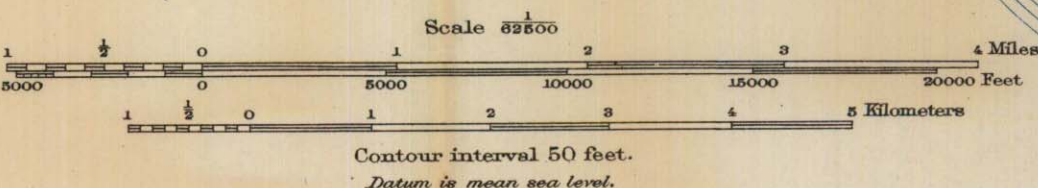


**GEOLOGIC AND TOPOGRAPHIC MAP  
OF THE  
ISLAND OF LANAI  
MAUI COUNTY, HAWAII**

GEOLOGY BY HAROLD T. STEARNS, 1936  
PREPARED IN COOPERATION WITH THE  
UNITED STATES GEOLOGICAL SURVEY



**EXPLANATION  
SEDIMENTARY ROCKS**

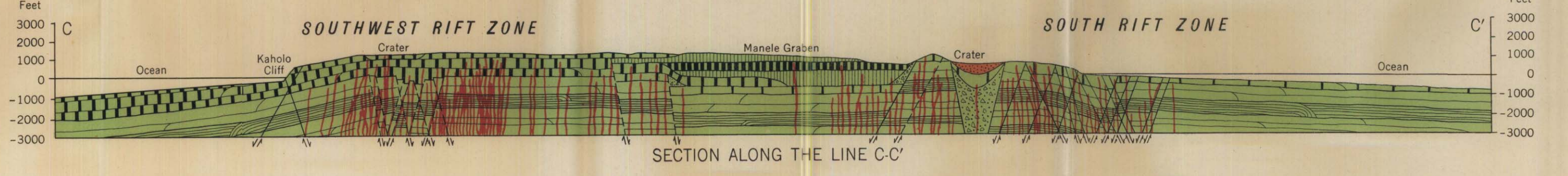
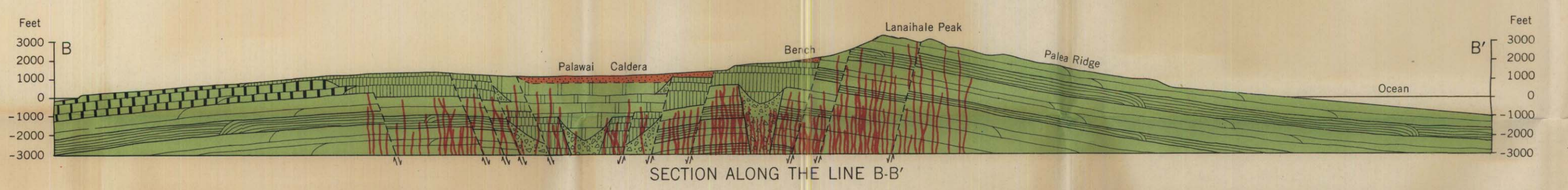
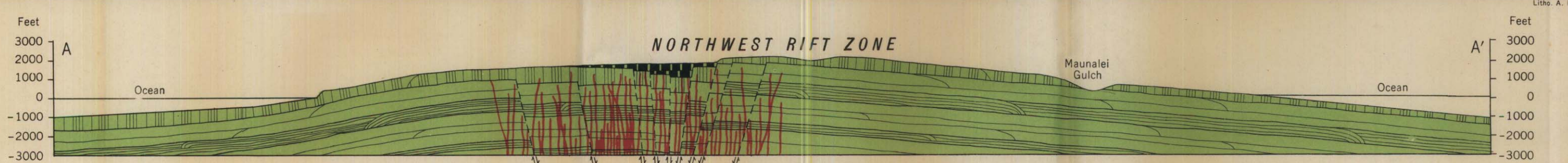
- PLEISTOCENE AND RECENT**  
Qa: Unconsolidated and poorly consolidated gravel, sand, and silt, and near the shore loose calcareous beach and dune sand. Includes both the younger and older alluvium and is possibly partly marine near the coast.
- PLEISTOCENE**  
Pis: Fossiliferous marine conglomerate in places containing small patches of limestone. P<sub>1</sub>: four small areas of tuffaceous sandstone deposited in craters in Kapoho Gulch, P<sub>2</sub>.
- PLEISTOCENE AND EARLY PLEISTOCENE (Essentially contemporaneous)**  
Pd: Dunes of cemented calcareous sand consisting of comminuted shells, coral, coralline algae, and foraminifers.

**VOLCANIC ROCKS**

- Tb, Dike, Tr**  
Tb: Basalt consisting of thin beds of pahoehoe and an laid down in rapid succession chiefly from fissure vents. Tr: Small patches of throat breccia filling eroded pit craters. Tr<sub>1</sub>: The dikes exposed in sea cliffs have been extended inland to give them sufficient length to show on the map even if they are not exposed at the surface beyond the cliff.
- Tc**  
Tc: Craters, chiefly a result of collapse, from most of which little or no lava flowed.
- Tt**  
Tt: Cones consisting of cinders, spatter, and lava.

- Normal fault showing downthrow side, dot and dash line where inferred. Some exposed only in the sea cliffs along the coast have been extended inland in order for them to show on the map.
- Strike and dip of beds.

- + 1 Fossiliferous marine conglomerate at an altitude of 1,070 feet, the type locality of the Mahana stand of the sea.
- + 2 Fossiliferous marine conglomerate in Kalukape Crater at an altitude of 560 feet, the type locality of the Manele stand of the sea.
- ..... Dotted line near the east and north shore indicates the outer edge of reef.
- Dug well equipped with windmill
- Waterhole
- Spring
- Tunnel
- Well shaft
- Tank
- Pipe line
- Pipe line tunnel



- EXPLANATION**  
Essentially contemporaneous
- Stream laid deposits of gravel, sand, and silt.
  - Talus and breccia that accumulated at the bases of fault cliffs and in craters.
  - Basalts poured from vents in the northwest rift zone. A, Basalts later than most of the faulting. B, Basalts in part earlier and in part contemporaneous with the faulting.
  - Late basalts poured from vents in the southwest rift zone.
  - Late basalts poured from vents in the south rift zone. A, Basalts confined in Manele graben. B, Basalts not confined in Manele graben.
  - Late basalts poured from vents in Palawai caldera. A, Late basalts confined in Palawai caldera. B, Early basalts forming the "bench" and not entirely confined in the caldera.
  - Early basalts poured from the Palawai caldera and the northwest rift, southwest rift, and the south rift prior to the major epoch of collapse.
  - Fault Dikes (Fault dashed where concealed)

**DIAGRAMMATIC STRUCTURE SECTIONS ACROSS LANAI**  
The amount of movement along the faults is greatly exaggerated in most places and dikes and faults are probably much more numerous. Marine sediments are omitted from the undersea parts, and the lava flows are much thinner and hence more numerous than indicated by the patterns.