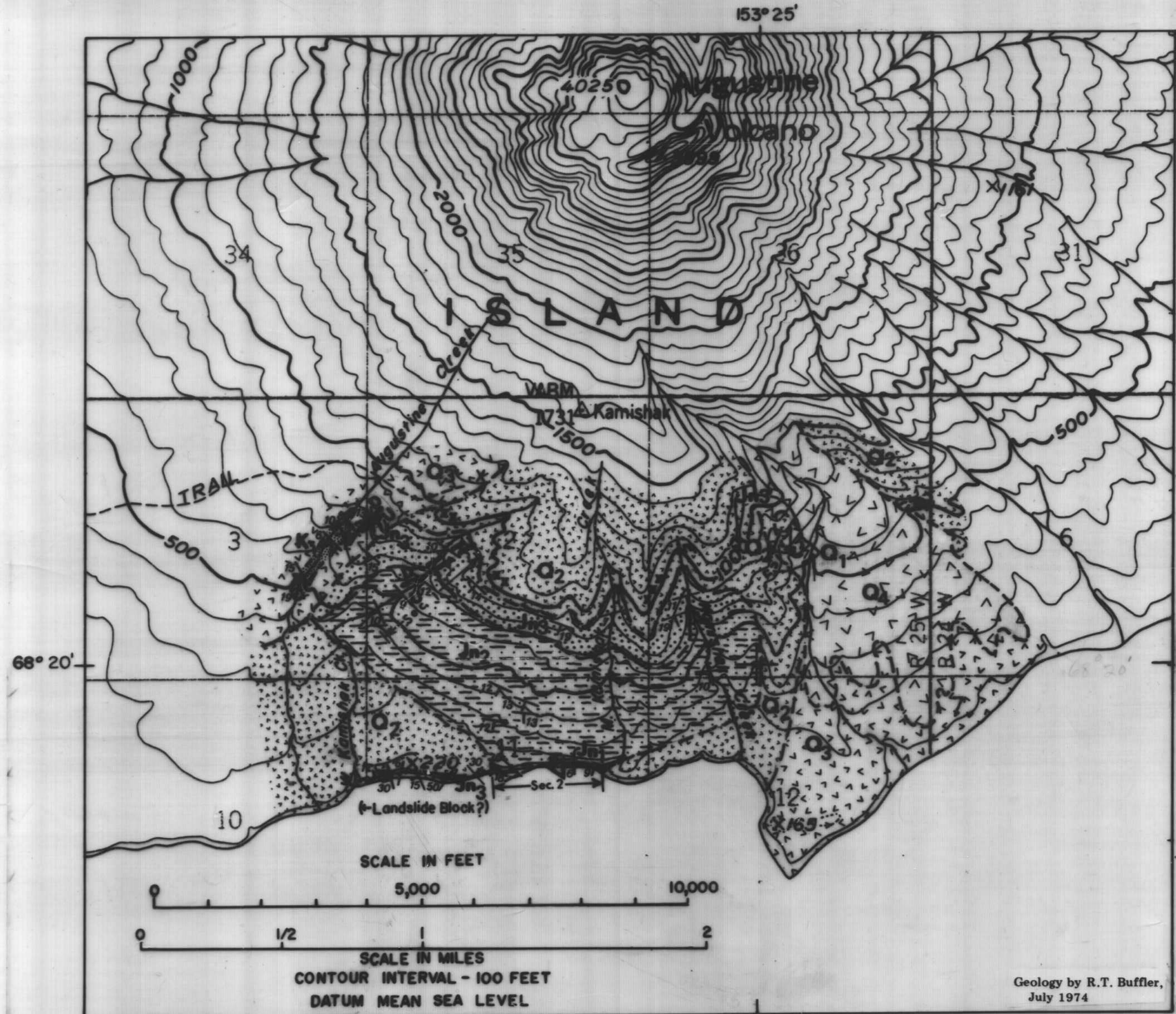
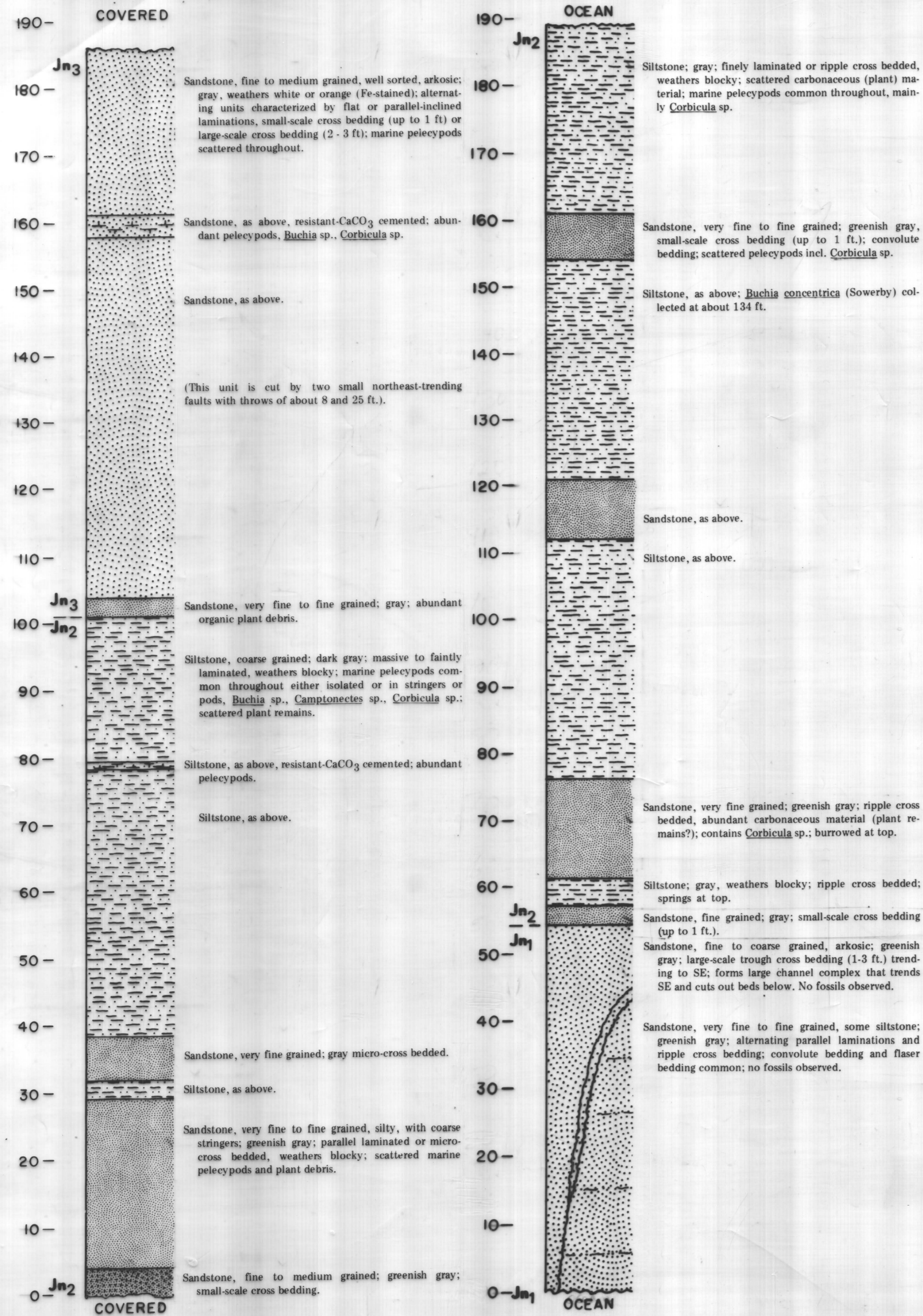


EXPLANATION

MEASURED SECTION NO. 1, WEST KAMISHAK CREEK, NAKNEK FORMATION (Jn2, Jn3), VERTICAL SCALE—FEET.

MEASURED SECTION NO. 2, BEACH SECTION (EAST TO WEST), NAKNEK FORMATION (Jn1, Jn2), VERTICAL SCALE—FEET.



- Q4**
Augustine volcaniclastic material deposited by ash flows, mudflows, and rubble flows during 1963-64 eruption. Dark colored. Poorly sorted; size ranges from sand to large blocks.
 - Q3**
Augustine volcaniclastic material deposited by ash flows, mudflows, and rubble flows; older than 1963-64 eruption. Dark colored. Poorly sorted; size ranges from sand to large blocks.
 - Q2**
Augustine volcaniclastic material deposited mainly by ash flows. Light colored. Mostly sand and lapilli. Abundant pumice. Bedding, cross bedding and channeling common. Has same dip as flank of volcano.
 - Q1**
Tuff and agglomerate; dark basaltic-looking sand and lapilli size fragments. Well cemented. Horizontal beds; overlies tilted Upper Jurassic sandstones. Possibly represents early stage of Augustine volcanic eruption.
 - X**
Scattered occurrences of rounded plutonic and sedimentary debris at approximately 1,000-foot elevation. Probably represents remnants of Pleistocene glacial till or outwash. Not seen in place.
 - Cretaceous**
J3c
Sandstone, fine grained, greenish gray, poorly bedded, muddy matrix. Contains Cretaceous marine fossils including ammonites and pelecypods (*Inoceramus*). Probably represents marine shelf deposits. Approximately 50 feet exposed in gulleys along middle part of Augustine Creek.
 - Naknek Formation**
J3b
Sandstone, fine to medium-grained, gray, arkosic, well sorted. Weathers white or iron stained. Consists of alternating subunits characterized by flat or parallel-inclined bedding, small-scale cross bedding, or large-scale cross bedding. Contains Upper Jurassic marine pelecypods. Probably represents "high-energy" beach or near-shore marine deposits. Forms prominent band of light-colored outcrops between 700 and 900 feet elevation, plus possible landslide block along seacoast. Over 100 feet exposed.
 - Upper Jurassic**
J2
Siltstone (coarse grained) and fine-grained sandstone, dark gray to gray, laminated. Weathers blocky. Small-scale and micro cross-bedding common throughout. Contains Upper Jurassic marine pelecypods. Carbonaceous material common throughout. Probably deposited on restricted marine shelf or in protected bay or estuary. Forms dip slope between 200- and 700-foot elevation. Covered on slope by thin layer of volcanic debris but exposed almost continuously in bottoms of most streams draining south slope. Approximately 150-200 feet thick. Conformable with units above and below.
 - J1**
Sandstone, fine to coarse grained, gray. About 50 feet thick. Exposed along beach cliff for approximately 1,200 feet west of E. Kamishak Creek. Consists of two subfacies. Eastern half is fine-grained sandstone and some siltstone. Parallel- and ripple-laminated. Convolute bedding and flaser bedding common. Probably deposited in sandy tidal-flat environment. Cut out laterally to the west by large sandstone channels consisting of medium- to coarse-grained sandstone with large-scale trough cross bedding (2-3 ft.) trending to southeast. May represent tidal-channel deposits. No marine fossils found in this entire unit.
- Geologic contact, dashed where approximately located.**
- Fault, dashed where approximately located. U, up-thrown block. D, downthrown block.**
- Strike and dip of beds.**
- Horizontal beds.**
- Trend of large sandstone channel.**
- Location of measured sections.**

GEOLOGIC MAP OF SOUTH AUGUSTINE ISLAND, LOWER COOK INLET, ALASKA

by
Richard T. Buffler