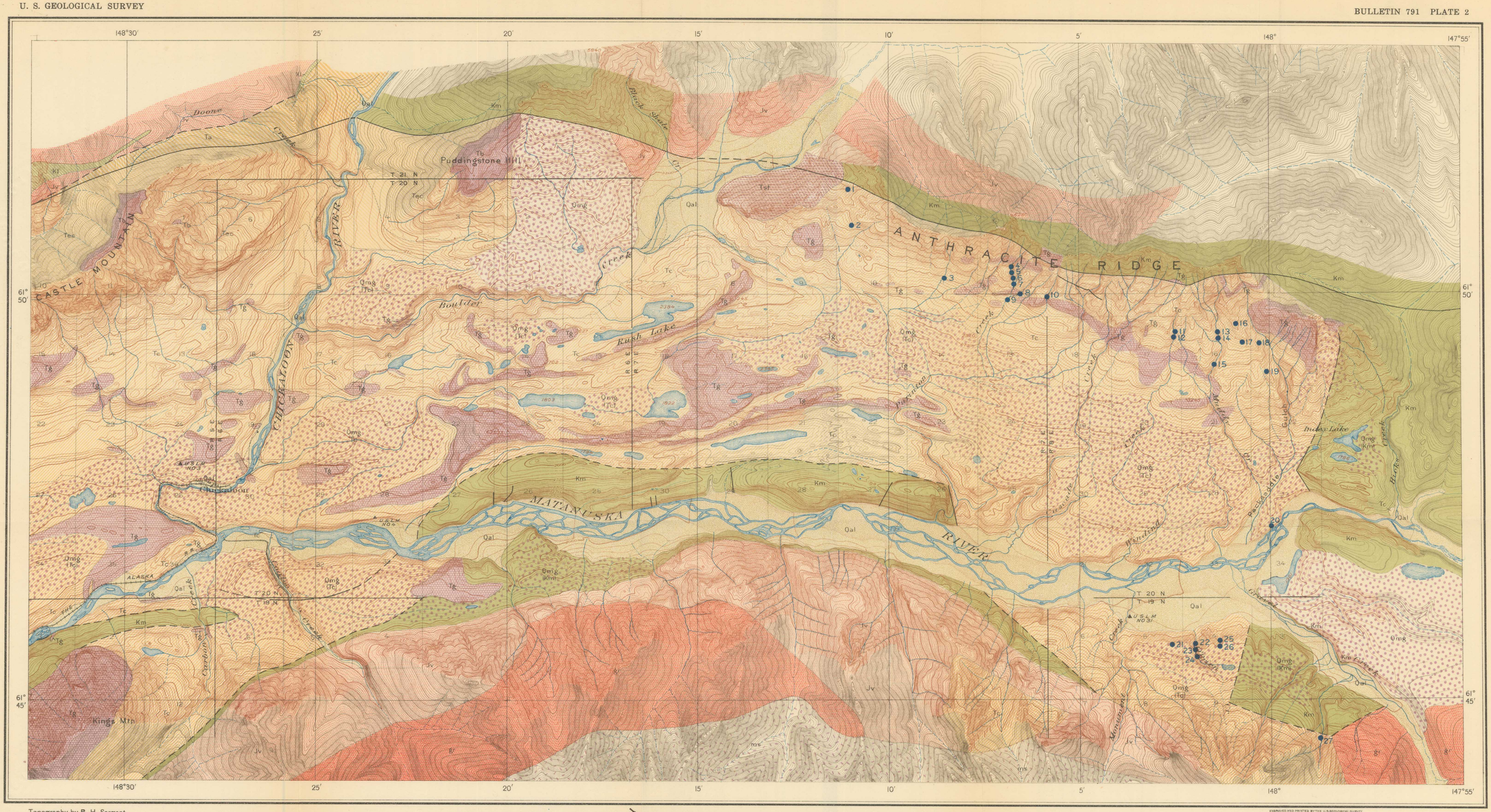

Topography by R. H. Sargent
Surveyed in 1909 and 1913
Light contours represent unsurveyed areas

ENGRAVED AND PRINTED BY THE U.S. GEOLOGICAL SURVEY

Geology by S. R. Capps,
G. C. Martin, J. B. Mertie, jr.,
F. J. Katz, and K. K. Landes
Surveyed in 1913 and 1924

GEOLOGIC MAP OF UPPER MATANUSKA VALLEY, ALASKA

SCALE 1:62500

1 ½ 0 1 2 3 4 Miles

4000 2000 0 4000 8000 12000 16000 Feet

1 ½ 0 1 2 3 4 5 Kilometers

Contour interval 50 feet.

Datum is mean sea level.

Elevations based upon bench marks established by Alaska Central Railroad
Geodetic position based upon data by U. S. Coast and Geodetic Survey
and General Land Office

1927

EXPLANATION

QUATERNARY

Qal — Stream gravel, sand, and silt

Qmg — Morainal material, terrace gravel, and talus
UNCONFORMITY

TERTIARY

Pliocene (?)

Tb — Basaltic lava

Tg — Intrusive gabbro, diabase, and basalt

Tsf — Soda felsite, intrusive
UNCONFORMITY

Miocene (?)

Tec — Eska conglomerate
(Alternating beds of conglomerate, 5 to 50 feet or more thick, and arkosic sandstone, in beds from a few inches to 40 feet thick)
UNCONFORMITY

Eocene

Tc — Chickaloon formation
(Shale and sandstone, cut by numerous sills and dikes of gabbro and diabase some of which are not mapped)

Ta — Arkose, shale, and conglomerate
(Possibly in part equivalent to Eska conglomerate and Chickaloon formation and in part older)
UNCONFORMITY

CRETACEOUS

Upper Cretaceous

Km — Matanuska formation
(Shale and sandstone, cut by dikes and sills of gabbro and diabase. As mapped possibly includes some Jurassic beds on north side of Anthracite Ridge)
UNCONFORMITY?

CRETACEOUS (?)

Lower Cretaceous (?)

Kl — Massive limestone
(Believed to be Lower Cretaceous but may be older)
UNCONFORMITY

JURASSIC

Lower Jurassic

Jv — Talkeetna formation
(Volcanic breccia, agglomerate, and tuff)

MESOZOIC

gr — Granitic intrusives
(Mainly quartz diorite)

EARLY MESOZOIC OR OLDER

ms — Metamorphosed sedimentary rocks
(Graywacke, slate, and schist)

Fault

Probable fault

● 12 — Coal outcrop described in text