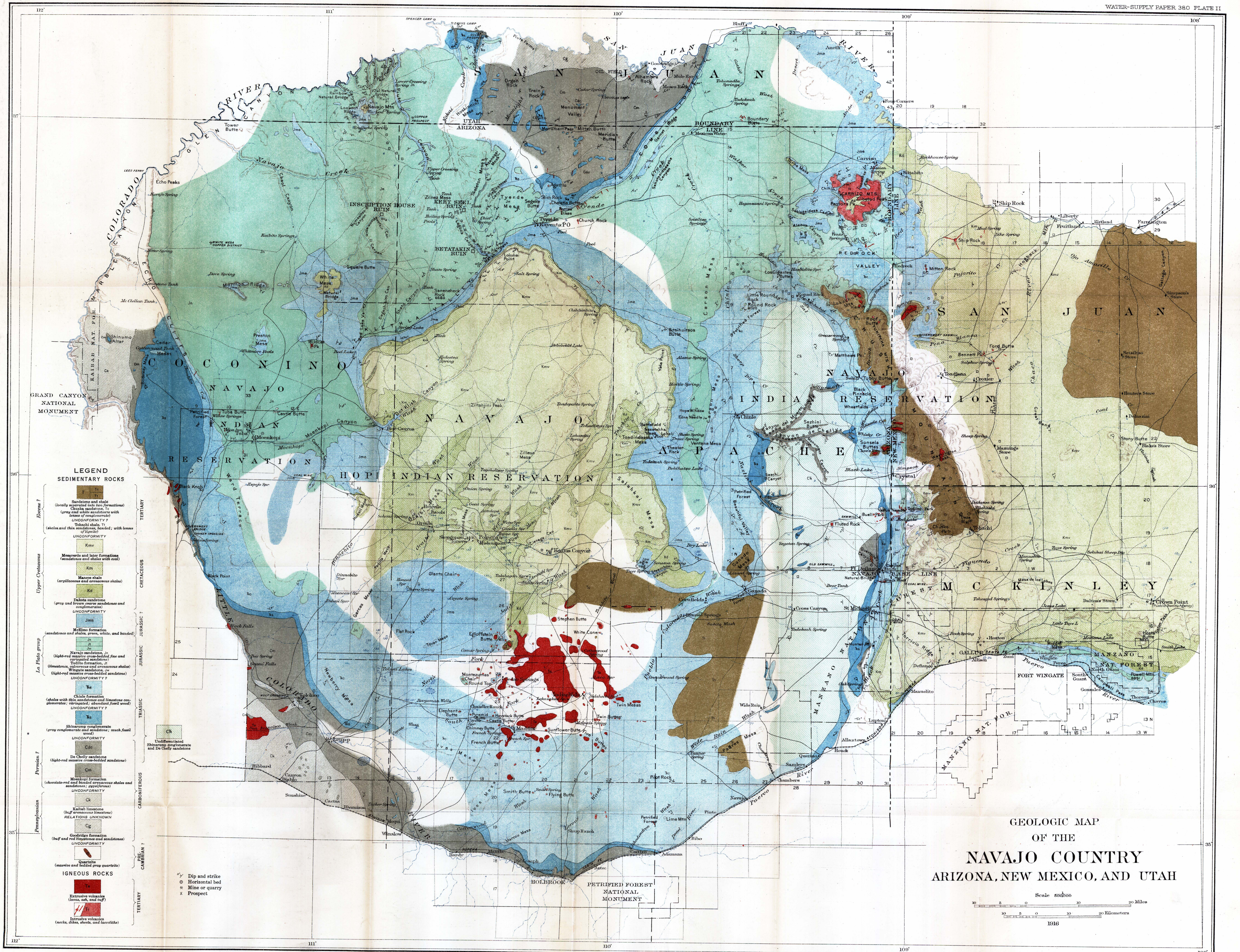
GEOLOGIC MAP
OF THE
NAVAJO COUNTRY
ARIZONA, NEW MEXICO, AND UTAH
Scale 1/500,000
10 5 0 10 20 Miles
10 5 0 10 20 Kilometers
1916
LEGEND
SEDIMENTARY ROCKS
Sandstone and shale (locally separated into two formations) Chuska sandstone, Tc (gray and white sandstones with lenses of conglomerate)
UNCONFORMITY ?
Tohachi shale, Tt (shales and thin sandstones, banded; with lenses of lignite)
UNCONFORMITY
Eocene ?
TERTIARY
Kmv
Mesaverde and later formations (sandstones and shales with coal)
Km
Mancos shale (argillaceous and arenaceous shales)
Kd
Dakota sandstone (gray and brown coarse sandstones and conglomerates)
UNCONFORMITY
Upper Cretaceous
CRETACEOUS
Jme
McElmo formation (sandstones and shales, green, white, and banded)
JURASSIC ?
Jn Jt Jw
Navajo sandstone, Jn (light-red massive cross-bedded fine and variegated sandstone)
Todilto formation, Jt (limestones, calcareous and arenaceous shales)
Wingate sandstone, Jw (light-red massive cross-bedded sandstone)
La Plata group
JURASSIC
UNCONFORMITY ?
Chinle formation (shales with thin sandstones and limestone conglomerates; variegated; abundant fossil wood)
UNCONFORMITY ?
Shinarump conglomerate (gray conglomerate and sandstone; much fossil wood)
UNCONFORMITY
TRIASSIC
Undifferentiated Shinarump conglomerate and De Chelly sandstone
Cdc
De Chelly sandstone (light-red massive cross-bedded sandstone)
Cm
Moenkopi formation (chocolate-red and banded arenaceous shales and sandstones; gypsiferous)
UNCONFORMITY
Permian ?
Ck
Kaibab limestone (buff arenaceous limestone)
RELATIONS UNKNOWN
Cg
Goodridge formation (buff and red limestones and sandstones)
UNCONFORMITY
Pennsylvanian
CARBONIFEROUS
Quartzite (massive and bedded gray quartzite)
PRE-CAMBRIAN ?
IGNEOUS ROCKS
Te
Extrusive volcanics (lavas, ash, and tuff)
Ti
Intrusive volcanics (necks, dikes, sheets, and laccoliths)
TERTIARY
Dip and strike
Horizontal bed
Mine or quarry
Prospect
112° 111° 110° 109° 108° 37° 36° 35°
SAN JUAN
UTAH
ARIZONA
BOUNDARY LINE
COCONINO
SAN JUAN
NAVAJO INDIAN RESERVATION
HOPI INDIAN RESERVATION
APACHE
McKINLEY
NAVAJO NATIONAL FOREST
MANZANO NAT. FOREST
MANZANO NAT. FOR.
KAIBAB NAT. FOR.
GRAND CANYON NATIONAL MONUMENT
PETRIFIED FOREST NATIONAL MONUMENT
FORT WINGATE
COLORADO RIVER
GLEN CANYON
MARBLE CANYON
ECHO CLIFFS
LITTLE COLORADO RIVER
SAN JUAN RIVER
Navajo Mtn
Monument Valley
Kayenta P.O.
Chinle
Canyon de Chelly
Carrizo Mts.
Lukachukai Mts.
Tunitcha Mts.
Chuska Mountain
Ship Rock
Farmington
Four Corners
Bluff
Ft. Defiance
Ganado
Gallup
Holbrook
Winslow
Tuba
Moenkopi
Oraibi
Keams Canyon
Leupp
Lees Ferry
INSCRIPTION HOUSE RUIN
KEET SEEL RUIN
BETATAKIN RUIN
Black Mesa
Puerco River
Chaco River
Crown Point
Thoreau