

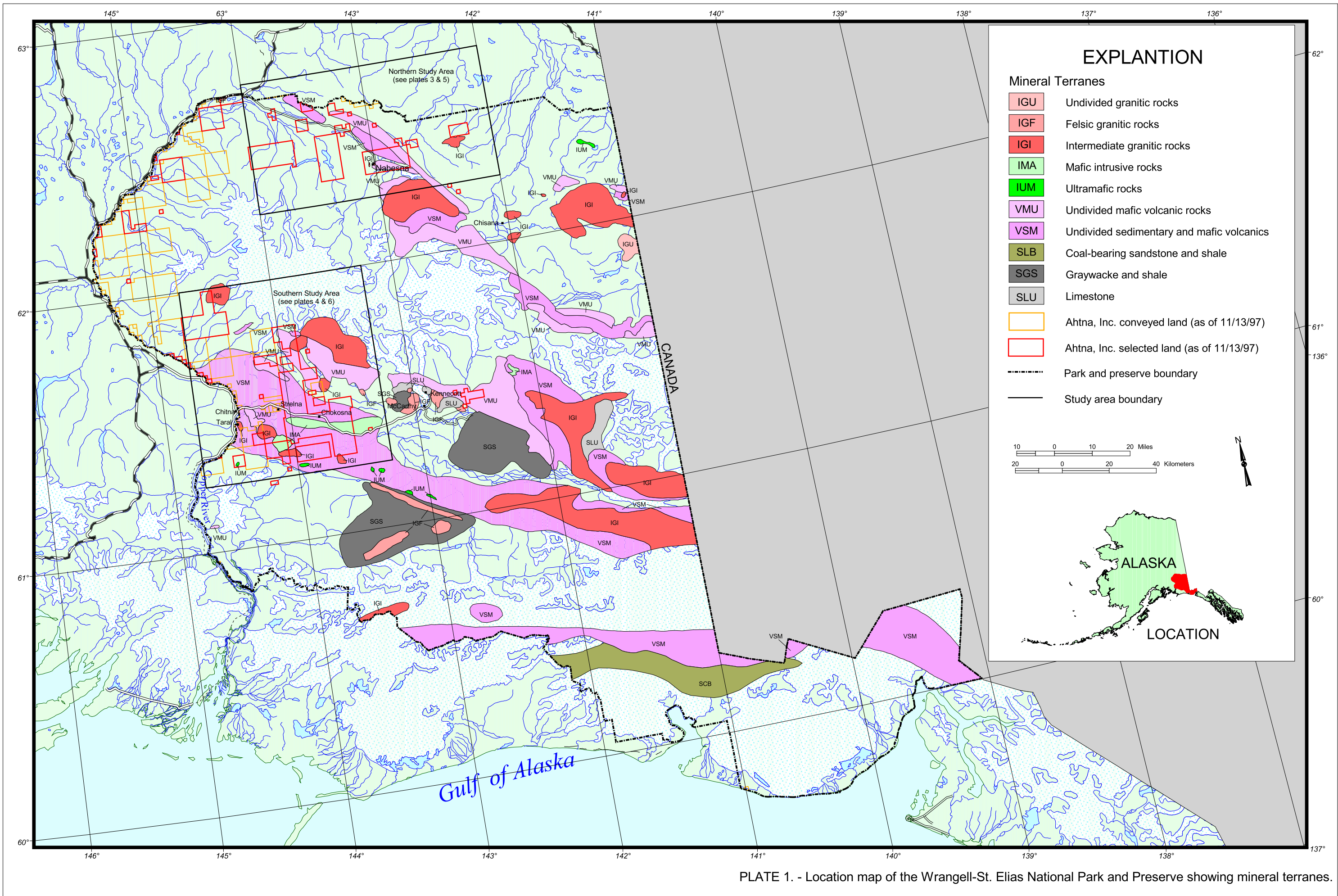


PLATE 1. - Location map of the Wrangell-St. Elias National Park and Preserve showing mineral terranes.

EXPLANATION

Volcanic Rocks



QTvi --- Quaternary and/or Tertiary intermediate volcanic rocks.



ITvm --- Lower Tertiary mafic volcanic rocks.



KJvm --- Cretaceous and Jurassic mafic volcanic rocks.



Trvm --- Triassic mafic volcanic rocks.

Intrusive Rocks



Tif --- Tertiary felsic intrusive rocks.



Kif --- Cretaceous felsic intrusive rocks.



Kii --- Cretaceous intermediate intrusive rocks.



Ki --- Cretaceous undifferentiated intrusive rocks.



Jii --- Jurassic intermediate intrusive rocks.



JTrii --- Jurassic and/or Triassic intermediate intrusive rocks.



Pif --- Pennsylvanian intermediate intrusive rocks.



Pim --- Pennsylvanian mafic intrusive rocks.



uPzim --- Upper Paleozoic mafic intrusive rocks.



Sii --- Silurian intermediate intrusive rocks.



Pzim --- Paleozoic mafic intrusive rocks.



Pzi --- Paleozoic intermediate intrusive rocks.

Ultramafic Rocks



PPu --- Pennsylvanian ultramafic rocks.



Pzu --- Paleozoic ultramafic rocks.

Stratified Sedimentary Sequence



Qh --- Holocene deposits. Alluvial, glacial, lake, swamp, landslide, and flood plain deposits.



Qp --- Pliocene deposits. Alluvial, glacial, dune sand, loess, and reworked sand and silt deposits.



uT --- Upper Tertiary rocks. Sandstone siltstone, shale, mudstone, and conglomerate of Miocene and Pliocene age.



mT --- Middle Tertiary rocks. Siltstone, sandstone, organic shale, and locally volcanic rocks.



IT --- Lower Tertiary rocks. Continental clastic rocks of Paleocene and Eocene age.



K --- Cretaceous rocks. Shelf deposits of sandstone, siltstone, shale, and limestone of the Kennicott and Chititu Formations.



IK --- Lower Cretaceous rocks. Interlayered submarine and subaerial andesitic fragmental volcanic detritus, and interbedded mafic volcanic rocks.



KJ1 --- Cretaceous and Upper Jurassic rocks. Graywacke, slate, argillite, minor conglomerate, volcanic detritus, and interbedded mafic volcanic rocks.



KJ2 --- Lower Cretaceous and Upper Jurassic rocks. Shallow and deep water clastic deposits (Oxfordian to Barremian) north of the Wrangell Mountains.



J --- Jurassic rocks. Shale, siltstone, and sandstone of the Nizina Mountain Formation and the Kotsina Conglomerate along the southern Wrangell Mountains.



JTr --- Jurassic and/or Triassic rocks. Limestone with minor dolomite, shale, and chert of the Chitstone Limestone, Nizina Limestone, and the McCarthy Formation along the southern Wrangell Mountains.



TrP --- Triassic and Permian rocks. Mafic volcanic rocks, limestone, and calcareous argillite.



PPP --- Permian and Pennsylvanian rocks. Basaltic to andesitic lavas and derivative volcanoclastic rocks, tuffs, minor gabbro, and local shallow-water sedimentary rocks metamorphosed to greenschist facies, and locally, amphibolite facies. Includes the Skolai Group, Strelina Formation (Permian), and Tetelna Volcanics.



Pz --- Paleozoic rocks. Marble in places containing tremolite.



D --- Paleozoic rocks. Pyroclastic rocks and ash flows interbedded with sedimentary rocks metamorphosed to schist and gneiss.

Continental Deposits



Tmc --- Miocene continental deposits. Sandstone, siltstone, shale, claystone, and conglomerate.



TKc --- Tertiary and Cretaceous continental deposits. Conglomerate, breccia, sandstone, arkose, mudstone, shale, and tuffaceous rocks.

Other



Water



Ice

Map symbols



Fault



Fault, dotted where concealed



Park and preserve boundary

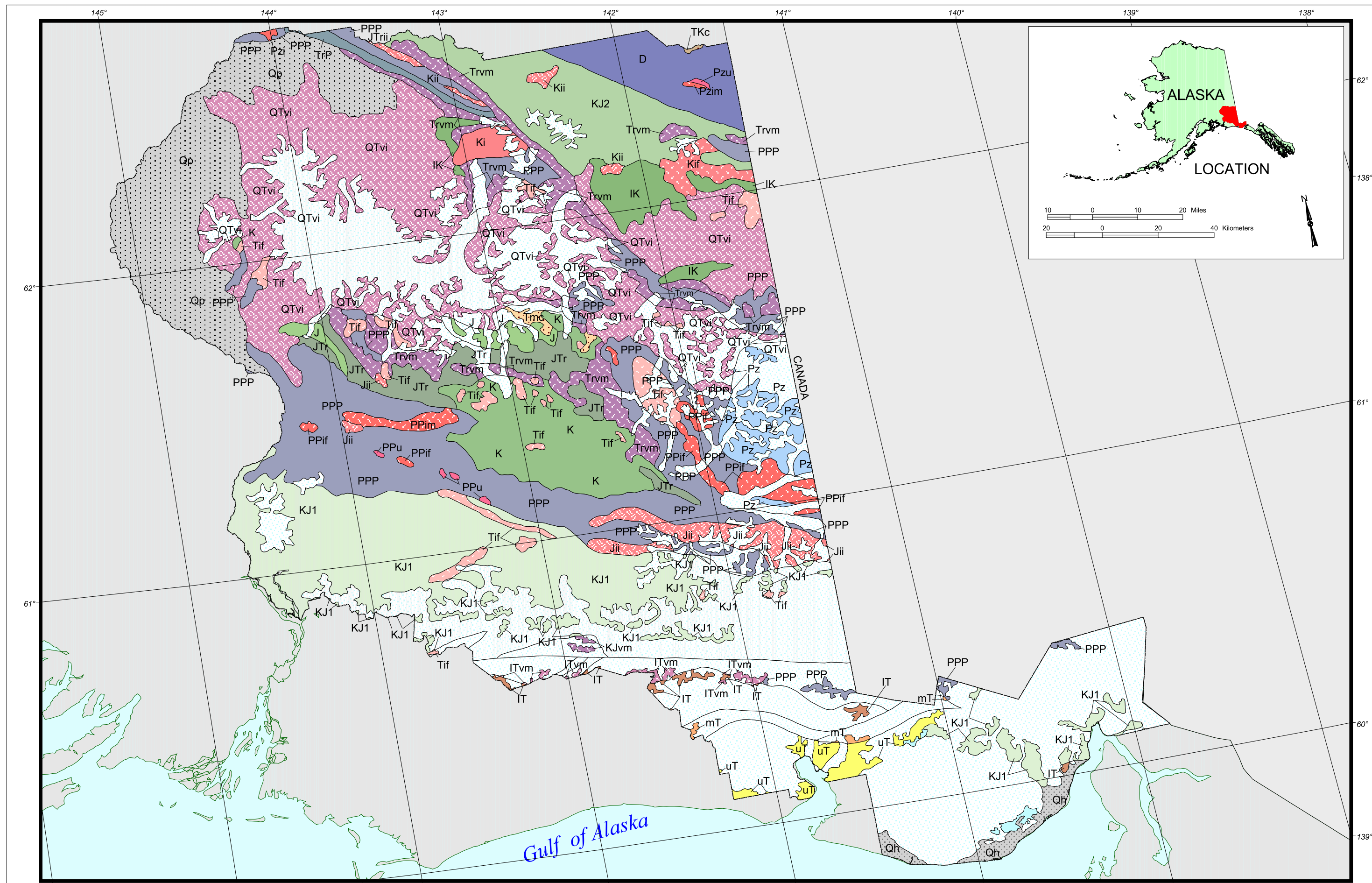
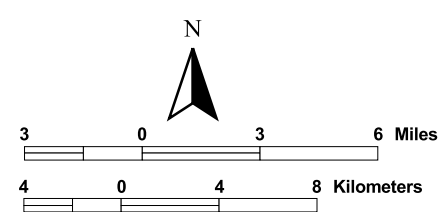
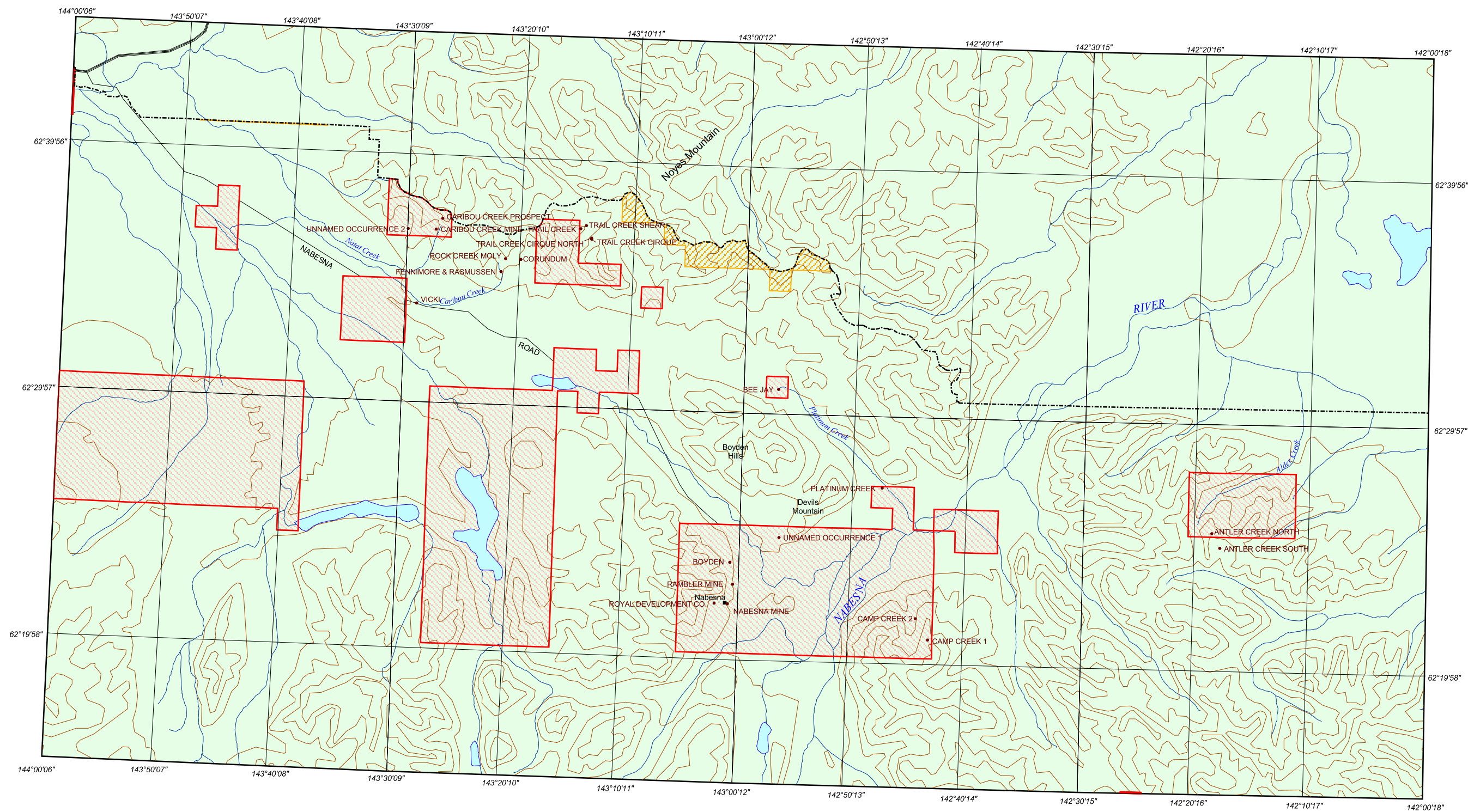


PLATE 2. - Geologic map of the Wrangell-St. Elias National Park and Preserve.
(adapted from Geologic Map of Alaska by Helen M. Beikman - 1980)



LEGEND

- Property location
- Ahtna, Inc. conveyed lands (as of 11/13/97)
- Ahtna, Inc. selected lands (as of 11/13/97)
- Town / village
- Park and preserve boundary

LOCATION MAP



Plate 3. Property location map of the northern study area Wrangell-St. Elias National Park and Preserve

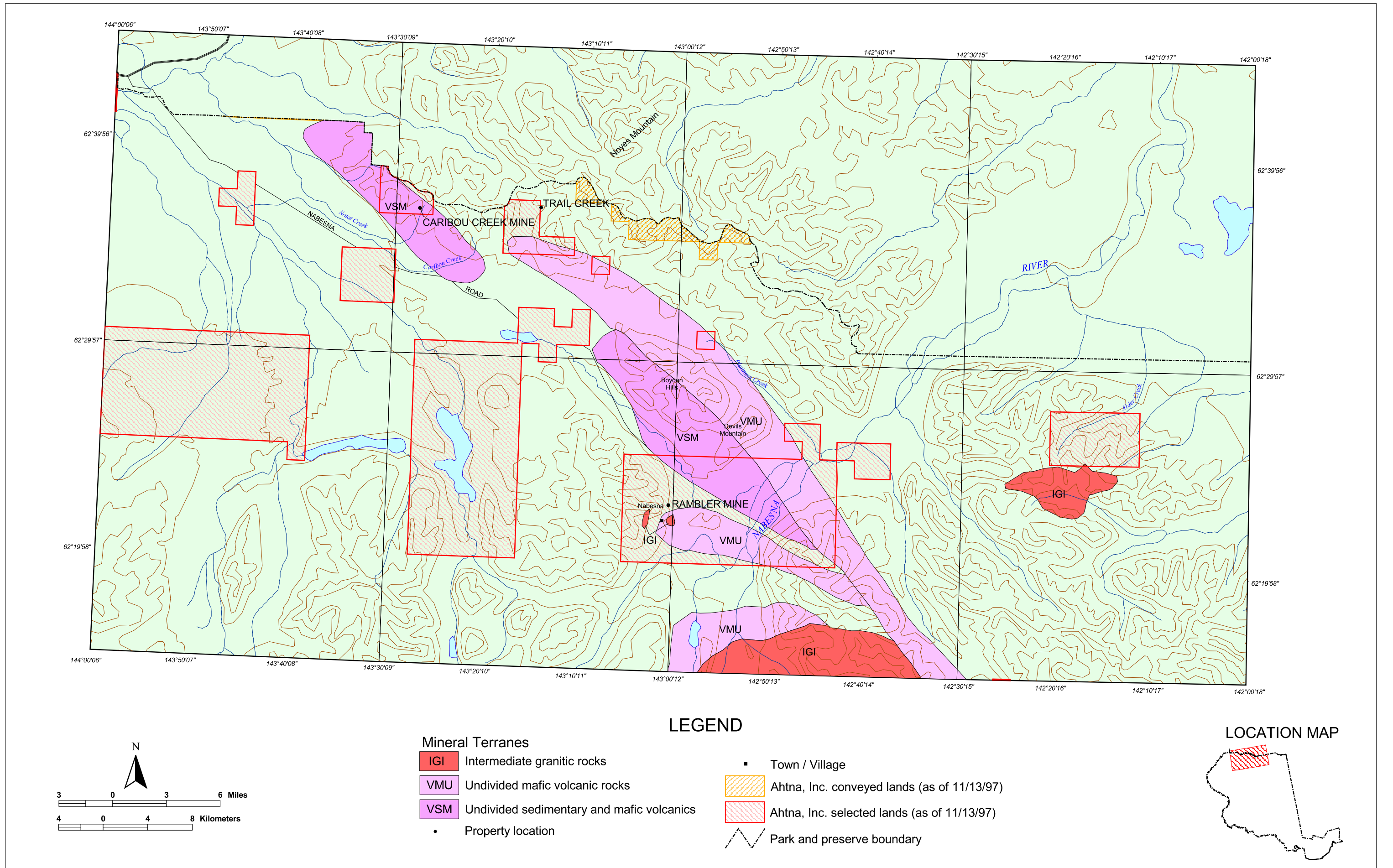
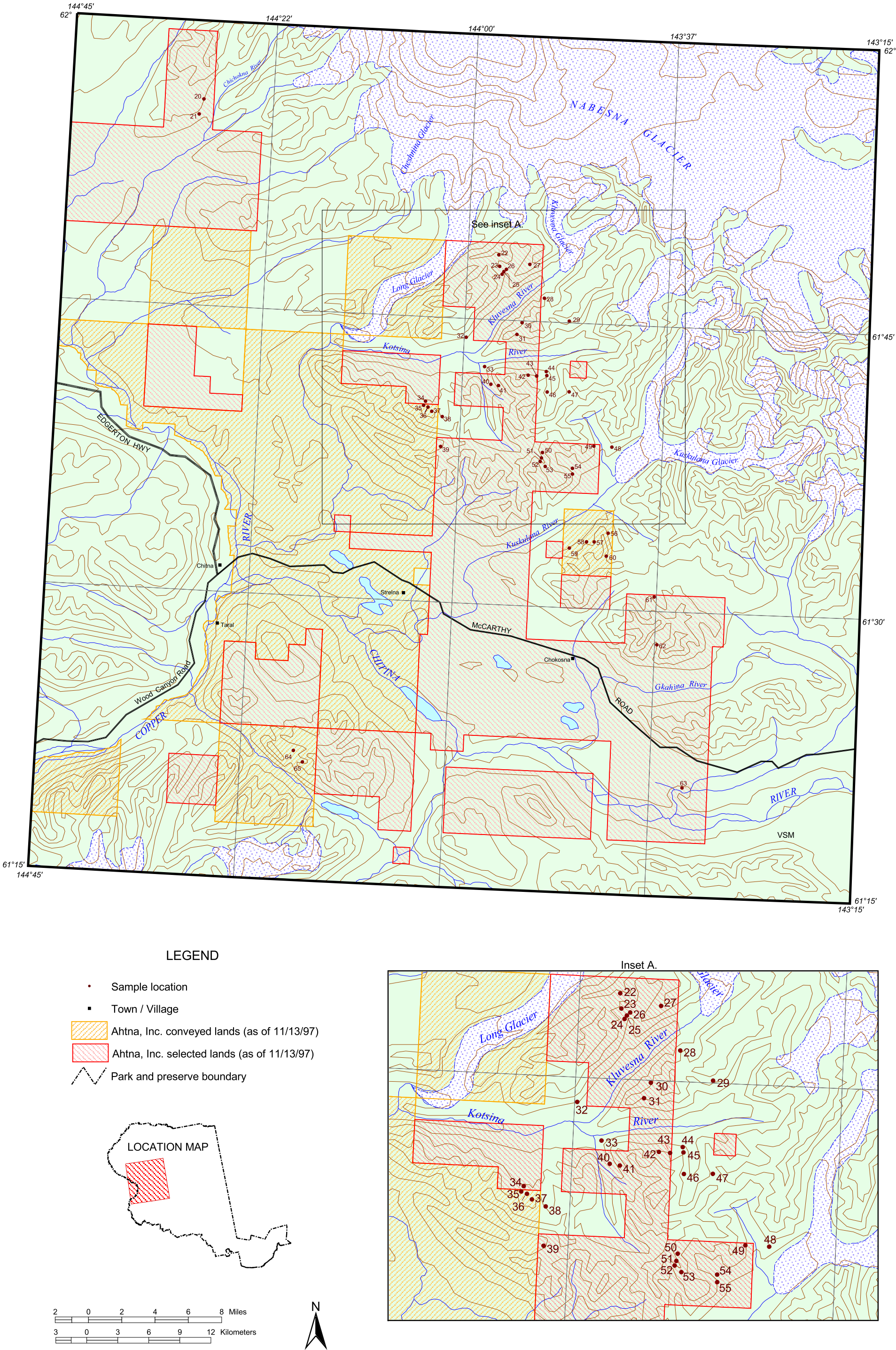


Plate 7. - Mineral Terranes map showing properties favorable for exploration in the northern study area.

Plate 6. - Sample location map of the southern study area Wrangell-St. Elias National Park and Preserve.



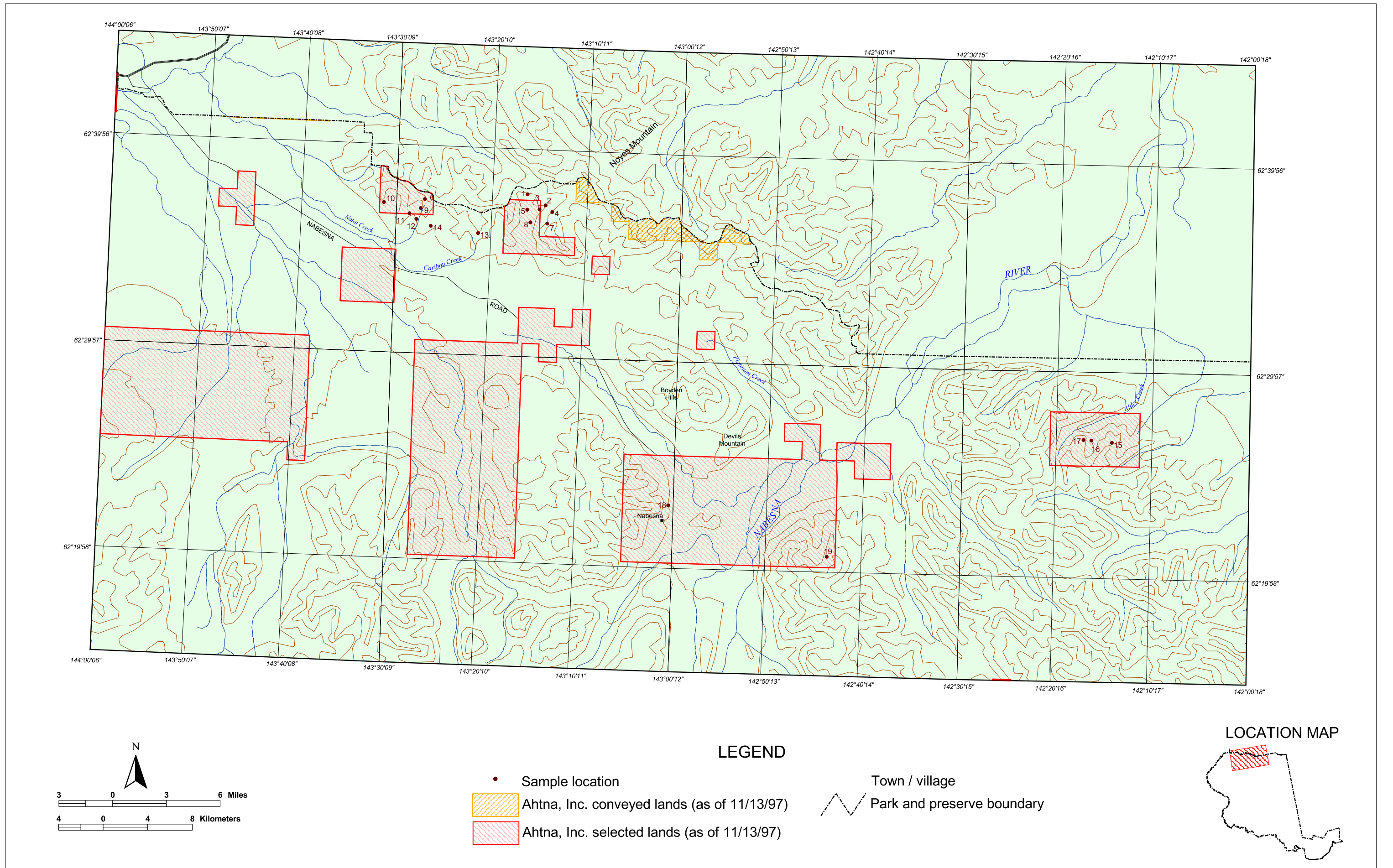
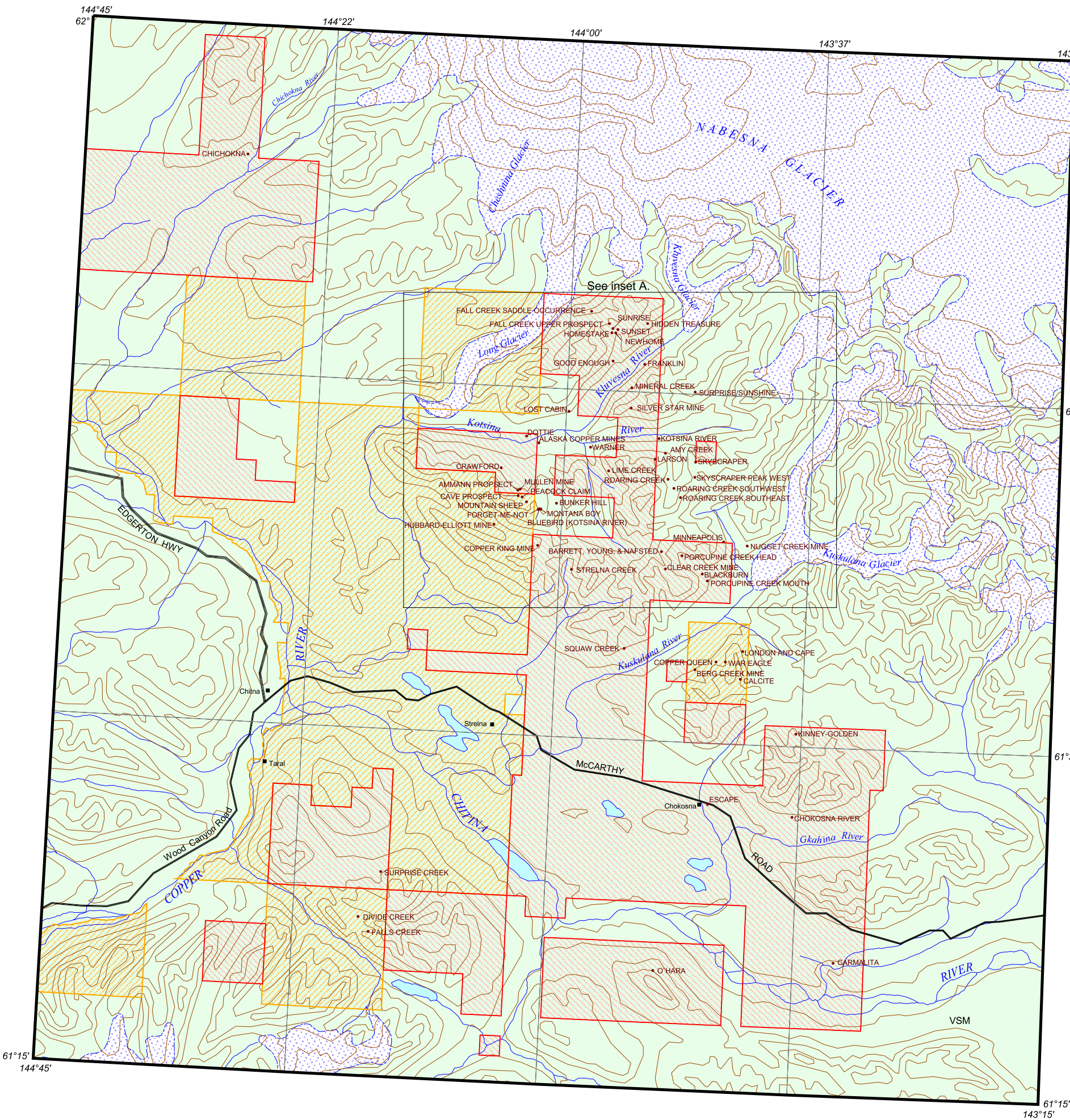


Plate 4. - Property location map of the southern study area Wrangell-St. Elias National Park and Preserve.



LEGEND

- Property location
- Town / Village
- Ahtna, Inc. conveyed lands (as of 11/13/97)
- Ahtna, Inc. selected lands (as of 11/13/97)
- ~ Park and preserve boundary

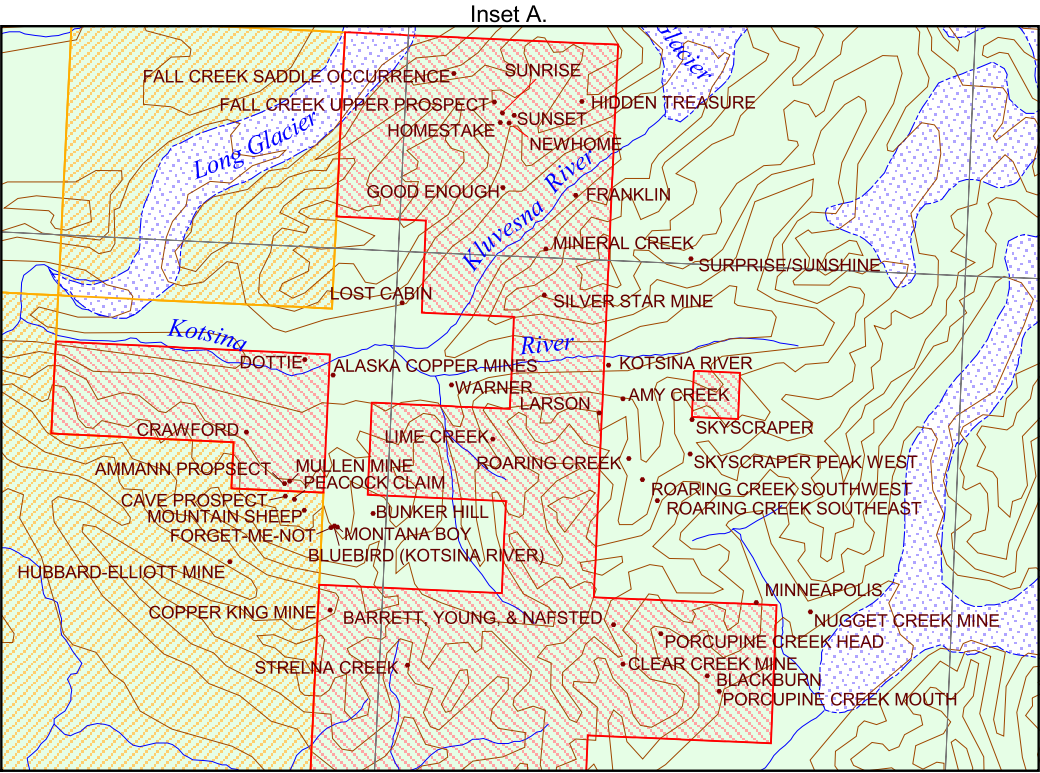
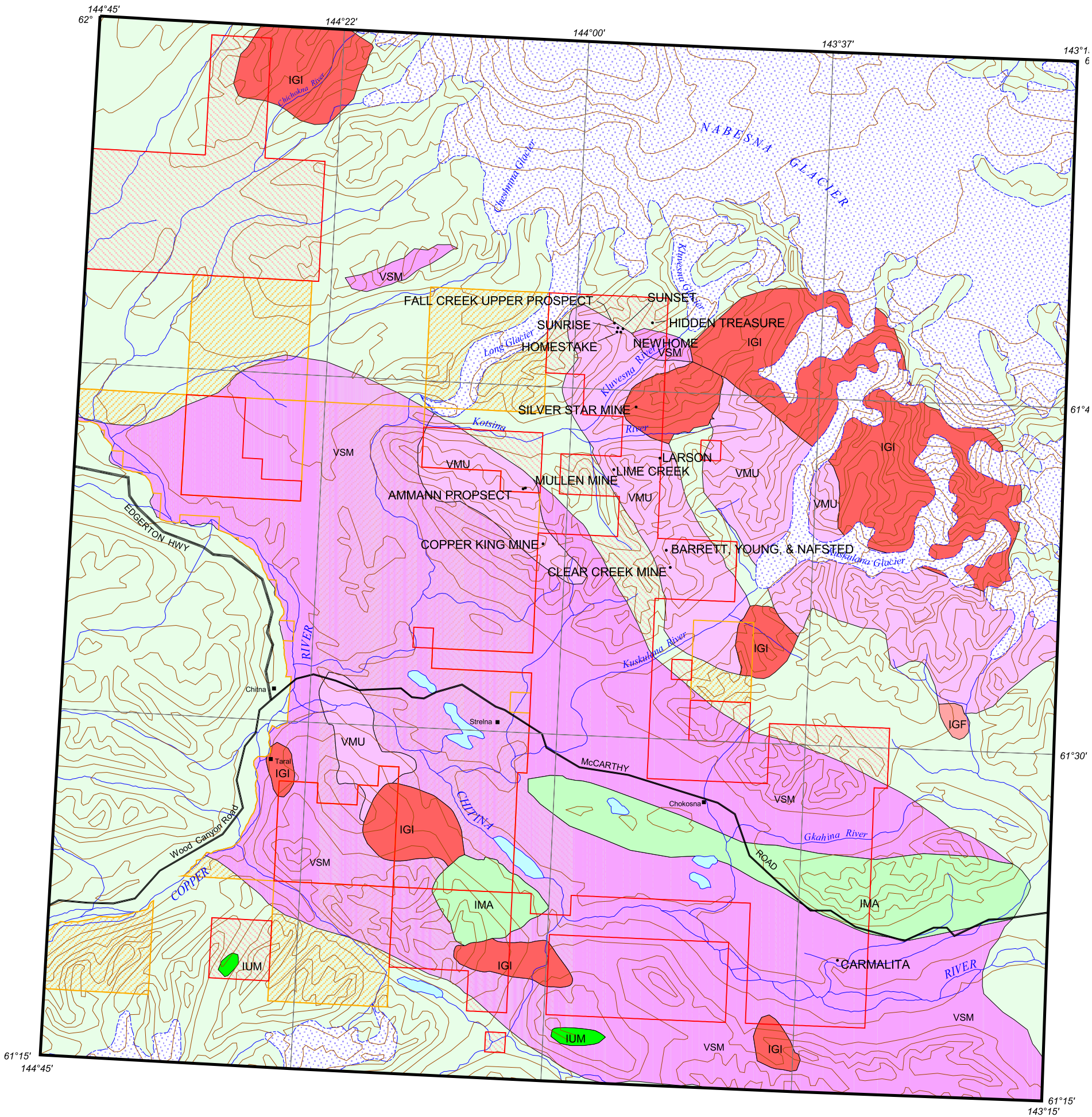


Plate 8. - Mineral Terranes map showing properties favorable for exploration in the southern study area.



LEGEND

Mineral Terranes

- IGF Felsic granitic rocks
- IGI Intermediate granitic rocks
- IMA Mafic intrusive rocks
- IUM Ultramafic rocks
- VMU Undivided mafic volcanic rocks
- VSM Undivided sedimentary and mafic volcanics

- Property location
- Town / Village

- Ahtna, Inc. conveyed lands (as of 11/13/97)
- Ahtna, Inc. selected lands (as of 11/13/97)

- Park and preserve boundary

