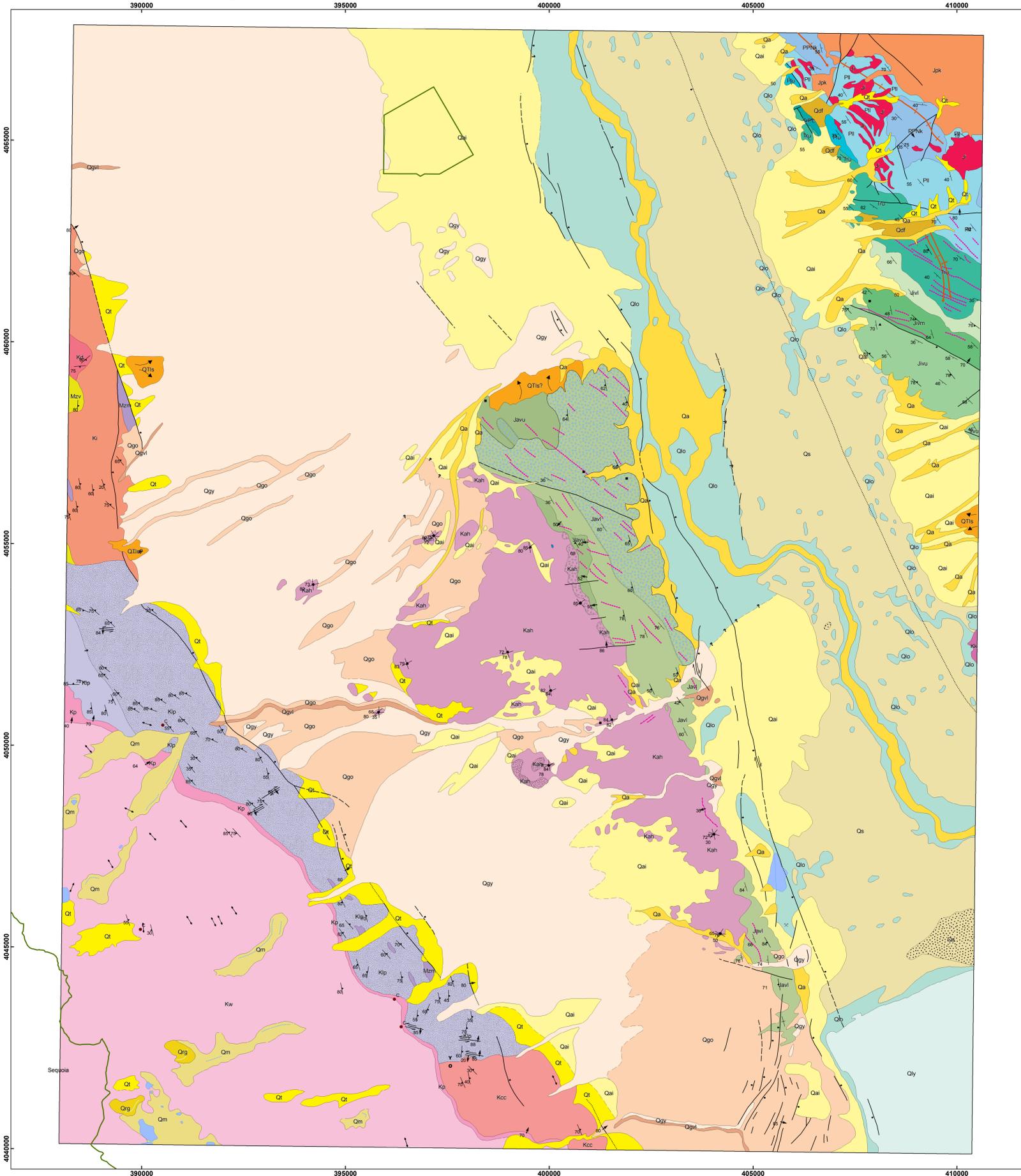
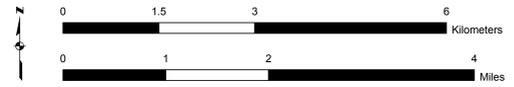




Geologic Map of Manzanar National Historic Site



<p>NPS Boundary</p> <p>Geologic Attitude Observation Localities</p> <ul style="list-style-type: none"> ↑ dip of inclined contact, dip direction indicated ↑ fault dip amount, dip direction indicated strike and dip of inclined beds strike and dip of inclined foliation strike and dip of inclined joints ↑ strike of foliation or trend of lineation, dip or plunge unknown ↑ strike of vertical beds ↑ strike of vertical joints <p>Geologic Point Features</p> <ul style="list-style-type: none"> ● C - copper mineralization locality ■ radiometric age-date locality ▲ paleontological age-date locality <p>Geologic Sample Localities</p> <ul style="list-style-type: none"> × gravel pit ○ well <p>Mine Point Features</p> <ul style="list-style-type: none"> → landslide direction, known or certain <p>Hazard Feature Lines</p> <ul style="list-style-type: none"> — moraine crest, known or certain — rock glacier crest, known or certain <p>Glacial Feature Lines</p> <ul style="list-style-type: none"> ▲ fold plunge arrow head ↑ fault down-side (bar and ball) indicator ↓ anticline symbol ↑ syncline symbol ↔ fault block movement direction arrow (right-lateral) ↔ fault block movement direction arrow (left-lateral) Y "Y" (younger) age-relationship of contiguous geologic units O "O" (older) age-relationship of contiguous geologic units <p>Fault, Fold and Other Map Symbology</p> <ul style="list-style-type: none"> — anticline, known or certain — syncline, known or certain 	<p>Faults</p> <ul style="list-style-type: none"> — normal fault, known or certain - - - normal fault, approximate — normal fault, concealed — right-lateral strike-slip fault, known or certain - - - right-lateral strike-slip fault, approximate — right-lateral strike-slip fault, concealed — unknown offset/displacement fault, known or certain - - - unknown offset/displacement fault, approximate — unknown offset/displacement fault, concealed - - - unknown offset/displacement fault, queried - - - unknown offset/displacement fault, approximate and queried — right-lateral fault, vertical displacement/offset unknown, known or certain — left-lateral fault, vertical displacement/offset unknown, known or certain <p>Linear Dikes</p> <ul style="list-style-type: none"> — Kahd - Alabama Hills Granite - apite and pegmatite dikes — KJf - Felsic dike — Kjd - Mafic, intermediate-composition, and minor felsic dikes <p>Dike Swarm Contacts</p> <ul style="list-style-type: none"> — known or certain — approximate — gradational <p>Dike Swarms</p> <ul style="list-style-type: none"> — Kjd - Mafic, intermediate-composition, and minor felsic dikes <p>Geologic Contacts</p> <ul style="list-style-type: none"> — known or certain - - - approximate — concealed — queried — approximate and queried — gradational — quadrangle boundary — water or shoreline — subaqueous (inferred) 	<p>Geologic Units</p> <ul style="list-style-type: none"> — water - Lakes and rivers Qal - Active alluvium Qes - Eolian sand Qesd - Eolian sand, areas of small dunes Qly - Younger lake deposits Qrg - Rock glaciers Qt - Talus, regolith, and colluvium Qai - Inactive alluvium Ogvl - Very large boulder gravels Qdf - Debris-flow deposits Qlo - Older lake deposits Qgy - Younger alluvial and debris-flow gravels Qm - Glacial moraines Ogo - Older alluvial and debris-flow gravels QTls - Landslide deposits Kwg - Whitney Granodiorite Kpg - Paradise Granodiorite Kah - Alabama Hills Granite Kahc - Alabama Hills Granite - mixed country rocks Kahh - Alabama Hills Granite - hypabyssal (?) facies Kip - Granodiorite of Lone Pine Creek Kipl - Granodiorite of Lone Pine Creek - fine grained, darker, and mixed facies Kkg - Kern Knob Granite Kd - Dragon pluton Kip - Independence Pluton Kcc - Granite of Carrol Creek Jlvu - Inyo Mountains Volcanic Complex - upper part Jlvm - Inyo Mountains Volcanic Complex - middle part Jlvi - Inyo Mountains Volcanic Complex - lower part Javu - Volcanic complex of the Alabama Hills - upper part Javl - Volcanic complex of the Alabama Hills - lower part Jpk - Pat Keyes pluton Jir - Intrusive rocks marginal to Pat Keyes Pluton MZv - Metavolcanic rocks MZm - Mafic plutonic rocks TRu - Union Wash Formation TRPC - Conglomerate Mesa Formation Plu - Lone Pine Formation - upper part Pll - Lone Pine Formation - lower part PPNK - Keeler Canyon Formation PZm - Metasedimentary rocks
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This map graphically presents digital geologic data prepared as part of the NPS Geologic Resources Division's Geologic Resources Inventory. The source map used in creation of the digital geologic data product was:

Stone, P., G. C. Dunne, J. G. Moore, and G. I. Smith. 2000. Geologic map of the Lone Pine 15" Quadrangle, Inyo County, California, Geologic Investigation Series I-2617. Scale: 1:62,500. Reston, VA: US Geological Survey.

Digital geologic data and cross sections for Manzanar National Historic Site, and all other digital geologic data prepared as part of the Geologic Resources Inventory, are available online at the NPS Data Store: <http://science.nature.nps.gov/nrddata/>

Source data scale is 1:62,500, scale as shown is 1:40,000. Map displays greater detail than source accuracy.