

# Cuyama Geologic Labels

ptype	name	source_ptype	source_name	source_age
Qsu	Undifferentiated Surficial Deposits; includes colluvium, slope wash, talus deposits, and other surface deposits of all ages	QTg	Fault gouge	Holocene to Pliocene?
Qls	Landslide Deposits; may include debris flows and older landslides	Qls	Landslide deposit	Holocene and late Pleistocene
Qls	Landslide Deposits; may include debris flows and older landslides	Qlsy	Young landslide deposit	Holocene
Qw	Alluvial Wash Deposits	Qw	Wetland deposit	Holocene
Qa	Alluvial Valley Deposits	Qa	Active alluvium	Holocene
Qya	Young Alluvial Valley Deposits	Qac	Alluvium and colluvium, undivided	Holocene and late Pleistocene
Qya	Young Alluvial Valley Deposits	Qya	Younger (inactive) alluvium	Holocene and late Pleistocene
Qoa	Old Alluvial Valley Deposits	Qoa	Older alluvium	late and middle? Pleistocene
Qvof	Very Old Alluvial Fan Deposits	QTd	Boulder diamicton, some remains of debris flows and alluvial flows	Pleistocene and late Pliocene?
Qvoa	Very Old Alluvial Valley Deposits	QTa	Old alluvium, locally deformed	Pleistocene and late Pliocene?
Qss	Coarse-grained formations of Pleistocene age and younger	QTm	Morales Formation, undivided, arkosic fluvial sandstone	Pleistocene and upper Pliocene
Qss	Coarse-grained formations of Pleistocene age and younger	QTmu	Morales Formation, upper member, sandstone and pebble conglomerate	Pleistocene and upper Pliocene
Qss	Coarse-grained formations of Pleistocene age and younger	QTt	Tulare Formation, nonmarine arkosic sandstone, conglomerate and siltstone	Pleistocene and Pliocene
Qsh	Fine-grained formations of Pleistocene age and younger	QTml	Morales Formation, lower member, claystone	Pleistocene and upper Pliocene
Tss	Coarse-grained Tertiary age formations	Tbl	Branch Canyon Sandstone, lower sandstone member	upper and middle Miocene
Tss	Coarse-grained Tertiary age formations	Tbu	Branch Canyon Sandstone, upper member, sandstone	upper and middle Miocene
Tss	Coarse-grained Tertiary age formations	Tc	Caliente Formation, undivided, fluvial sedimentary rocks	upper to middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcc	Caliente Formation, upper sandstone and conglomerate	upper Miocene
Tss	Coarse-grained Tertiary age formations	Tcds	Cozy Dell Shale, sandstone member	upper Eocene

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Tss	Coarse-grained Tertiary age formations	Tcg	Caliente Formation, sedimentary breccia, conglomerate and sandstone	upper to middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcr	Caliente Formation, gypsiferous red sandstone and mudstone member	upper to middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcsc	Caliente Formation, sandstone and conglomerate member	upper to middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcsl	Caliente Formation, lower sandstone and conglomerate member	upper to middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcu	Caliente Formation, upper member, sandstone and mudstone	upper to middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcw	Coldwater Sandstone, sandstone member	upper Eocene
Tss	Coarse-grained Tertiary age formations	Tcwm	Coldwater Sandstone, mixed sandstone and shale member	upper Eocene
Tss	Coarse-grained Tertiary age formations	Tcx	Caliente Formation, basal breccia member	upper to middle Miocene
Tss	Coarse-grained Tertiary age formations	Tgcg	Granitic-clast conglomerate	Miocene
Tss	Coarse-grained Tertiary age formations	Tj	Juncal Formation, undivided	middle and lower Eocene
Tss	Coarse-grained Tertiary age formations	Tjc	Juncal Formation, conglomerate member	middle and lower Eocene
Tss	Coarse-grained Tertiary age formations	Tjm	Juncal Formation, mixed sandstone and mudstone member	middle and lower Eocene
Tss	Coarse-grained Tertiary age formations	Tjs	Juncal Formation, sandstone member	middle and lower Eocene
Tss	Coarse-grained Tertiary age formations	Tma	Matilija Sandstone, sandstone member	upper and middle Eocene
Tss	Coarse-grained Tertiary age formations	Tmas	Matilija Sandstone, mixed sandstone and shale member	upper and middle Eocene
Tss	Coarse-grained Tertiary age formations	Tms	Monterey Formation, sandstone member	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tmss	Monterey Formation, basal sandstone member	middle and lower Miocene
Tss	Coarse-grained Tertiary age formations	Tmsu	Unnamed sandstone	lower Miocene
Tss	Coarse-grained Tertiary age formations	Tmt	Monterey Formation, sandstone	upper to lower Miocene
Tss	Coarse-grained Tertiary age formations	Tncb	Nonmarine rocks of Santa Barbara Canyon, conglomerate and breccia member	lower Miocene and upper Oligocene?
Tss	Coarse-grained Tertiary age formations	Tnp	Nonmarine rocks of Santa Barbara Canyon, red pebble-boulder conglomerate and conglomeratic sandstone member	lower Miocene and upper Oligocene?

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Tss	Coarse-grained Tertiary age formations	Tns	Sandstone of Nettle Springs of Stone and Cossette (2000), Lockwood Clay, and upper part of Caliente Formation, undivided	lower Pliocene and upper Miocene
Tss	Coarse-grained Tertiary age formations	Tnsc	Nonmarine rocks of Santa Barbara Canyon, sandstone and conglomerate unit	lower Miocene and upper Oligocene?
Tss	Coarse-grained Tertiary age formations	Tnv	Nonmarine rocks of Santa Barbara Canyon, variegated member, sandstone, mudstone and claystone	lower Miocene and upper Oligocene?
Tss	Coarse-grained Tertiary age formations	Tp	Pattway Formation, interbedded sandstone and shale	Paleocene
Tss	Coarse-grained Tertiary age formations	Tpls	Pleito Formation, sandstone member	Oligocene
Tss	Coarse-grained Tertiary age formations	Tprc	Plush Ranch Formation of Carman (1964), basal conglomerate member	lower Miocene and Oligocene
Tss	Coarse-grained Tertiary age formations	Tpr	Plush Ranch Formation of Carman (1964), granite and gneiss breccia member, conglomerate and sedimentary breccia	lower Miocene and Oligocene
Tss	Coarse-grained Tertiary age formations	Tprs	Plush Ranch Formation of Carman (1964), sandstone member	lower Miocene and Oligocene
Tss	Coarse-grained Tertiary age formations	Tprx	Plush Ranch Formation of Carman (1964), megabreccia member	lower Miocene and Oligocene
Tss	Coarse-grained Tertiary age formations	Tqc	Quatal Formation, conglomeratic member	Pliocene
Tss	Coarse-grained Tertiary age formations	Tqcc	Quatal Formation, coarse conglomerate member	Pliocene
Tss	Coarse-grained Tertiary age formations	Tqs	Quatal Formation, upper sandstone member	Pliocene
Tss	Coarse-grained Tertiary age formations	Tqw	Quatal Formation, white sandstone member	Pliocene
Tss	Coarse-grained Tertiary age formations	Tqx	Quatal Formation, sedimentary breccia	Pliocene
Tss	Coarse-grained Tertiary age formations	Trp	Rincon Shale, Piedra Blanca Sandstone Member	lower Miocene
Tss	Coarse-grained Tertiary age formations	Ts	Sand	Pliocene
Tss	Coarse-grained Tertiary age formations	Tsc	Simmler Formation, conglomerate, sandstone and shale member	Oligocene?
Tss	Coarse-grained Tertiary age formations	Tscg	Simmler Formation, fanglomerate member	Miocene and Oligocene?
Tss	Coarse-grained Tertiary age formations	Tses	San Emigdio Formation, sandstone member	Oligocene and upper Eocene?
Tss	Coarse-grained Tertiary age formations	Tsm	Santa Margarita Sandstone, undivided, marine sandstone and mudstone	upper Miocene
Tss	Coarse-grained Tertiary age formations	Tsml	Santa Margarita Sandstone, lower sandstone, conglomerate and claystone member	upper Miocene

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Tss	Coarse-grained Tertiary age formations	Tsms	Santa Margarita Sandstone, sandstone and mudstone member	upper and middle? Miocene
Tss	Coarse-grained Tertiary age formations	Tsmu	Santa Margarita Sandstone, upper sandstone member	upper Miocene
Tss	Coarse-grained Tertiary age formations	Tsp	Sespe Formation, interbedded conglomerate, sandstone, siltstone and claystone	Oligocene and upper Eocene?
Tss	Coarse-grained Tertiary age formations	Tspc	Sespe Formation, lower conglomerate member	Oligocene and upper Eocene?
Tss	Coarse-grained Tertiary age formations	Tss	Simmler Formation, sandstone and shale member	Oligocene?
Tss	Coarse-grained Tertiary age formations	Ttc	Tecuya Formation, sandstone and clay member	lower Miocene to upper Eocene?
Tss	Coarse-grained Tertiary age formations	Ttg	Tecuya Formation, conglomerate and minor sandstone member	lower Miocene to upper Eocene?
Tss	Coarse-grained Tertiary age formations	Ttm	Tejon Formation, Metralla Sandstone Member	upper Eocene
Tss	Coarse-grained Tertiary age formations	Tts	Temblor Formation, sandstone member	lower Miocene and upper Oligocene?
Tss	Coarse-grained Tertiary age formations	Ttu	Tejon Formation, Uvas Conglomerate Member	middle or lower Eocene
Tss	Coarse-grained Tertiary age formations	Tuc	Unnamed marine units, conglomerate	Eocene
Tss	Coarse-grained Tertiary age formations	Tum	Unnamed marine units, mixed sandstone and shale	Eocene
Tss	Coarse-grained Tertiary age formations	Tus	Unnamed marine units, sandstone and minor mudstone	Eocene
Tss	Coarse-grained Tertiary age formations	Tusg	Sandstone and conglomerate	Pliocene
Tss	Coarse-grained Tertiary age formations	Tvpr	Vaqueros Formation, Painted Rock Sandstone Member	lower Miocene
Tss	Coarse-grained Tertiary age formations	Tvq	Vaqueros Formation, Quail Canyon Sandstone Member	lower Miocene
Tss	Coarse-grained Tertiary age formations	Tvss	Vaqueros Formation, sandstone member	lower Miocene
Tss	Coarse-grained Tertiary age formations	Tws	White arkosic sandstone and conglomerate	Miocene?
Tsh	Fine-grained Tertiary age formations	Tbm	Branch Canyon Sandstone, middle claystone member	upper and middle Miocene
Tsh	Fine-grained Tertiary age formations	Tbw	Bitterwater Creek Shale, mudstone	upper Miocene
Tsh	Fine-grained Tertiary age formations	Tcd	Cozy Dell Shale, shale member	upper Eocene
Tsh	Fine-grained Tertiary age formations	Tcl	Caliente Formation, lower red and white banded member, mudstone and sandstone	upper to middle Miocene
Tsh	Fine-grained Tertiary age formations	Tcs	Caliente Formation, mudstone and sandstone member	middle and lower Miocene

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Tsh	Fine-grained Tertiary age formations	Tcsh	Caliente Formation, variegated mudstone and sandstone member	upper to middle Miocene
Tsh	Fine-grained Tertiary age formations	Te	Etchegoin Formation, marine siltstone and sandstone	Pliocene and upper Miocene?
Tsh	Fine-grained Tertiary age formations	Tem	Marine shale and minor sandstone	lower Eocene
Tsh	Fine-grained Tertiary age formations	Tjsh	Juncal Formation, shale member	middle and lower? Eocene
Tsh	Fine-grained Tertiary age formations	TKbx	Green silicified clastic rocks, siltstone, sandstone, conglomerate and breccia	Tertiary or Cretaceous
Tsh	Fine-grained Tertiary age formations	TKm	Mudstone, claystone, and minor sandstone	lower Eocene to Late Cretaceous
Tsh	Fine-grained Tertiary age formations	TKs	Mudstone and minor sandstone	lower Eocene to Late Cretaceous
Tsh	Fine-grained Tertiary age formations	Tlc	Lockwood Clay	Pliocene?
Tsh	Fine-grained Tertiary age formations	Tm	Monterey Formation, undivided	middle and lower Miocene
Tsh	Fine-grained Tertiary age formations	Tmb	Monterey Formation, black siliceous shale	upper to lower Miocene
Tsh	Fine-grained Tertiary age formations	Tmg	Monterey Formation, Gould Shale Member	upper to lower Miocene
Tsh	Fine-grained Tertiary age formations	Tml	Monterey Formation, lower calcareous member, shale	middle and lower Miocene
Tsh	Fine-grained Tertiary age formations	Tmls	Limestone of Bee Rock, limestone and shale	lower Miocene
Tsh	Fine-grained Tertiary age formations	Tmsh	Monterey Formation, Saltos Shale Member	middle and lower Miocene
Tsh	Fine-grained Tertiary age formations	Tng	Nonmarine rocks of Santa Barbara Canyon, gypsiferous mudstone member	lower Miocene and upper Oligocene?
Tsh	Fine-grained Tertiary age formations	Tph	Marine shale, sandstone, and limestone of "Peanut Hill"	Miocene, Oligocene, or Eocene
Tsh	Fine-grained Tertiary age formations	Tpl	Pleito Formation, claystone and shale member	Oligocene
Tsh	Fine-grained Tertiary age formations	Tprl	Plush Ranch Formation of Carman (1964), lacustrine member, mudstone, shale, siltstone, evaporites, and very fine sandstone	Early Miocene and Oligocene
Tsh	Fine-grained Tertiary age formations	Tq	Quatal Formation, undivided, mudstone, siltstone, sandstone, conglomerate	Pliocene
Tsh	Fine-grained Tertiary age formations	Tqb	Quatal Formation, brown clay member	Pliocene
Tsh	Fine-grained Tertiary age formations	Tqg	Quatal Formation, green mudstone member	Pliocene
Tsh	Fine-grained Tertiary age formations	Tqp	Quatal Formation, gypsiferous member, white gypsum	Pliocene

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Tsh	Fine-grained Tertiary age formations	Tqu	Quatal Formation, upper member, claystone	Pliocene
Tsh	Fine-grained Tertiary age formations	Tr	Rincon Shale	lower Miocene
Tsh	Fine-grained Tertiary age formations	Tsb	Sierra Blanca Limestone	upper Paleocene
Tsh	Fine-grained Tertiary age formations	Tse	San Emigdio Formation, shale member	Oligocene and upper Eocene?
Tsh	Fine-grained Tertiary age formations	Tsh	Simmler Formation, shale member	Oligocene?
Tsh	Fine-grained Tertiary age formations	Tsmc	Santa Margarita Sandstone, claystone member	upper Miocene
Tsh	Fine-grained Tertiary age formations	Tsmg	Santa Margarita Sandstone, gypsum member	upper and middle? Miocene
Tsh	Fine-grained Tertiary age formations	Tt	Temblor Formation, shale and sandstone	lower Miocene and upper Oligocene?
Tsh	Fine-grained Tertiary age formations	Ttl	Tejon Formation, Live Oak Shale Member	middle Eocene
Tsh	Fine-grained Tertiary age formations	Tucl	Claystone	Pliocene
Tsh	Fine-grained Tertiary age formations	Tush	Unnamed marine units, claystone, mudstone and shale	Eocene
Tsh	Fine-grained Tertiary age formations	Tv	Vaqueros Formation, undivided siltstone and sandstone	lower Miocene
Tsh	Fine-grained Tertiary age formations	Tvs	Vaqueros Formation, Soda Lake Shale Member	lower Miocene
Tv	Tertiary age formations of volcanic origin	Tcb	Caliente Formation, basalt flows	upper to middle Miocene
Tv	Tertiary age formations of volcanic origin	Tib	Intrusive basalt	Miocene
Tv	Tertiary age formations of volcanic origin	Tprb	Plush Ranch Formation of Carman (1964), basalt member	lower Miocene and Oligocene
Tv	Tertiary age formations of volcanic origin	Tvb	Tecuya Formation, basalt member	lower Miocene to upper Eocene?
Tv	Tertiary age formations of volcanic origin	Tvd	Tecuya Formation, dacite and andesite member	lower Miocene to upper Eocene?
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Kcg	Conglomerate	Upper Cretaceous
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Kms	Sandstone and minor mudstone	Upper Cretaceous
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Kss	Sandstone and subordinate mudstone and conglomerate	Upper Cretaceous
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Ksw	White sandstone of Big Pine Mountain	Upper Cretaceous
Ksh	Fine-grained Cretaceous age formations of sedimentary origin	KJe	Espada Formation, shale with sandstone interbeds	Lower Cretaceous and Upper Jurassic

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Ksh	Fine-grained Cretaceous age formations of sedimentary origin	Kmd	Mudstone and minor sandstone	Upper Cretaceous
Ksh	Fine-grained Cretaceous age formations of sedimentary origin	Ksm	Mudstone and subordinate sandstone	Upper Cretaceous
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Jfc	Franciscan Complex, chert	Jurassic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Jfg	Franciscan Complex, greenstone	Jurassic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Jfw	Franciscan Complex, graywacke	Jurassic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	KXmg	Migmatitic biotite gneiss	Cretaceous and Paleoproterozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	MzPsc	Marble, quartzite, and schist	Mesozoic? to Proterozoic?
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	MzPzm	Metasedimentary rocks, marble	Mesozoic or Paleozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	MzPzq	Metasedimentary rocks, quartzite	Mesozoic or Paleozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	MzPzs	Metasedimentary rocks, schist, gneiss, calc-silicate hornfels and quartzite	Mesozoic or Paleozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	TKrs	Rand Schist	Paleocene or Late Cretaceous
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Tmy	Mylonite of the Sawmill Mountain Thrust	Paleocene
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Tps	Pelona Schist, schist and quartzite	Paleocene

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pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Tpsb	Pelona Schist, metabasalt	Paleocene
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Xag	Augen gneiss of Frazier Mountain	Paleoproterozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Xbg	Biotite gneiss	Paleoproterozoic
sp	Serpentinite of all ages	Jfs	Franciscan Complex, serpentinite	Jurassic
gr	Granitic and other intrusive crystalline rocks of all ages	Kap	Quartz diorite of Antimony Peak	Early Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Kda	Diorite of Apache Canyon	Cretaceous?
gr	Granitic and other intrusive crystalline rocks of all ages	Kga	Granite of Apache Canyon	Cretaceous?
gr	Granitic and other intrusive crystalline rocks of all ages	Kgbm	Monzogranite of Brush Mountain	Late Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Kgd	Gneissic granodiorite	Late Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Kgl	Granite of Lockwood Peak	Late Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Kgn	Granite of Cerro Noroeste	Late Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Kgp	Granite of Mount Pinos	Late Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Khd	Hornblende diorite	Cretaceous?
gr	Granitic and other intrusive crystalline rocks of all ages	Kle	Lebec Granodiorite	Late Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	MzPzg	Granitic and metamorphic rocks, includes granite, gneiss and metasedimentary rocks	Cretaceous to Paleozoic
gr	Granitic and other intrusive crystalline rocks of all ages	MzPzgb	Mafic-ultramafic complex, gabbro and pyroxenite	Middle Jurassic to upper Paleozoic
gr	Granitic and other intrusive crystalline rocks of all ages	MzPzmd	Mafic-ultramafic complex, metadiabase, amphibolite, gabbro and pyroxenite	Middle Jurassic to Late Paleozoic
gr	Granitic and other intrusive crystalline rocks of all ages	MzPzqd	Mafic-ultramafic complex, hornblende quartz diorite to tonalite	Middle Jurassic to Late Paleozoic

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gr	Granitic and other intrusive crystalline rocks of all ages	Ti	Intrusive olivine diabase	Miocene