

Table 5.—Criteria for distinguishing quartzites and sandstones of the Bolsa and Abrigo formations from those of the Troy ^{quartzite} formation^{1/}

	Strata of younger Precambrian age		Strata of Middle and Late Cambrian age	
	Quartzite member of Troy	Chediski sandstone member of Troy	Quartzites of Bolsa and Abrigo formations	Sandstones of Bolsa and Abrigo formations
Position in sequence	At top of Troy. If remnant, this member is ordinarily in contact with Bolsa quartzite.	Basal part of Troy; generally comprises most and in places all of Troy where Cambrian strata are overlying.	Bolsa quartzite at base of Cambrian section. Like quartzites approximately in mid-section of Abrigo are separated from Bolsa by shaly-parting sandstones.	Bolsa gradational up into Abrigo by increase in thin shaly sandstone and micaceous sandstone beds. Like sandstones underlie and overlie quartzites of Abrigo.
Lithology	Well-sorted clean quartzite, practically free of feldspar and pebbles. Basal unit coarse-grained; rest mostly medium-grained.	Very poorly sorted pebbly sandstone of well-rounded, minutely pitted (frosted) quartz grains in sericite-clay matrix. Weakly to firmly cemented. Coarse feldspar grains may be conspicuous. Locally includes coarse muscovite.	Medium- to coarse-grained, moderately well to poorly sorted "gritty" quartzite. Granules and small pebbles abundant in some sections of Bolsa, which has conspicuous basal conglomerate.	Fine-grained, finely micaceous sandstone or sandy mudstone constitute much of Abrigo. Dolomite cement rare except in part of region south of Aravaipa Creek. Coarser sandstones texturally somewhat like Bolsa may be feldspathic and friable.
Bedding and related features	Tabular beds thin to thick; cross-stratification may not be conspicuous and is not diagnostic to distinguish Troy from Bolsa.	Irregularly bedded; tops of many beds channeled and marked by scattered pebbles or thin layers or lenses of conglomerate. Slump structures common in middle part of most sections. Uppermost beds cross-stratified on large scale. Where quartzitic the bedding structures are obscure.	In tabular beds generally 1-4 ft thick. Partings between beds etch out much more conspicuously than those of Troy.	Thinly and somewhat irregularly bedded. Shaly partings common.
Color	Light-colored. Generally pinkish gray to light gray; may be light brownish gray to medium gray.	Variable. Mostly yellowish gray or light brownish gray, but includes beds or units of medium dark gray in some areas. Locally pale to grayish red. Outcrops not limonite-stained except where locally of quartzite and of colors like quartzite member.	Light-colored like Troy quartzite, but everywhere conspicuously stained reddish brown on weathered surfaces.	Most fine-grained strata are pale yellowish brown to reddish brown and rusty-weathering. But in some areas several units are yellowish gray to dark greenish gray. Coarser sandstones tend to be lighter colors.
Fossils	None.	None.	<u>Scolithus</u> sparse to abundant in upper part of Bolsa, and in many places characterize quartzites of Abrigo. Phosphatic linguloid brachiopods abundant in transition zone between Bolsa and Abrigo.	Small worm casts and phosphatic brachiopods sparse in some sections, abundant in others. Fucoidal markings of larger scale occasionally seen in greenish gray or coarser grained sandstones. Trilobite fragments too rare to be diagnostic part of lithology.
Remarks	Generally more vitreous and massive-cropping than Cambrian quartzites.	Where quartzitic is distinguished by massive outcrops, poor sorting, pebble content, and sparse coarse grains of orange-pink feldspar.	In some areas, but not generally in area where overlies Troy, Bolsa is vitreous and massive-cropping.	Fine-grained sandstones and finely micaceous sandstones have no counterparts in Troy.

^{1/} These descriptions apply only to part of region where Bolsa and Abrigo formations overlie Troy quartzite.