Hillslope deposits

Alluvial-fan deposits Poorly sorted sand, gravel, silt, and clay

Landslide deposits Detached bedrock; fragments range in size from large blocks down to clay (Kms), recognizable block of upper

sandstone member of Mancos Shale

Qfa Qf6

Older alluvial-fan deposits Poorly sorted gravel, sand, silt, and clay not graded to present drainage; locally includes a partial cover of alluvial-fan deposit (Qf) Qfa, partly covers gravel unit Qgb Qfb, partly covers gravel unit Qgc

RST Rs Rss , Pss

State Bridge Formation Rst, arkosic unit typically exposed on Toner Creek about 1 mile north of map: poorly sorted arkosic beds of sandstone, conglomeratic sandstone, conglomerate, siltstone, and silty claystone; finer grained beds are grayish red, coarser grained beds are moderate orange pink and pale pink; pebbles in conglomerates as much as 5 inches across. Sand grains are mostly subangular to angular but sparse coarse grains have high sphericity. Thin to thick beds; coarser grained beds are cross-laminated in part and rest on scoured surfaces. About 370 feet thick; thins and becomes finer grained to north, cut out westward by pre-Chinle erosion Rs, upper siltstone and sandstone unit: grayish-red clayey siltstone; thin lenses of arkosic sandstone and minor claystone; beds are 1 inch to 2 feet thick; sparse parallel

ripple marks on bedding surfaces. 40 to 60 feet thick where not thinned by pre-Chinle erosion Rss, sandstone unit that caps Sloane Peak: pale-orange-pink very fine grained well-sorted arkosic sandstone, thin to thick beds with medium-sized low-angle cross-laminations. 150 to 250 feet thick where not thinned by pre-Chinle

RPs, lower siltstone and sandstone unit, about 2,000 feet thick in northeast, thins westward to about 900 feet; about 600 feet thick south of Castle Creek fault zone: upper part, grayish-red to moderate-reddish-orange interbedded clayey siltstone and arkosic sandstone. Siltstone contains scattered coarse sand grains having high sphericity. Sandstones generally are well sorted, some composed of subangular grains and some of coarse grains having high sphericity. Beds are thin to thick without noticeable lensing; some bedding surfaces have parallel ripple marks. Lower part, clayey siltstone with some sandstone near base, sparse coarse grains with high sphericity; poorly developed bedding; hackly weathering surface

Pss, South Canyon Creek Member: medium-gray silty and sandy limestone, upper part usually shows wavy laminations. 0 to 30 inches thick, present only in north, not mapped in northeast

Ps, lower part: 60 to about 200 feet thick Psf, sandstone unit of Fryingpan River: moderate-reddishorange, very fine to medium grained, clean sandstone; in thick beds with large-scale high-angle cross-laminations. 0 to about 100 feet thick

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Maroon Formation Grayish-red to moderate-reddish-orange siltstone, clayey siltstone, and silty claystone; grayish-red, pale-red, and pale-red-purple arkosic sandstone, some beds conglomeratic with pebbles as much as 3 inches across; mediumgray limestone. Lenticular thin to thick beds; coarser grained beds are cross-laminated; cusp ripple marks on some bedding surfaces. About 3,000 feet exposed in quadrangle

Eagle Valley Formation Poorly exposed greenish-gray with some yellow and brown tints claystone, siltstone, and sandstone and medium-gray to white gypsum; thin to thick beds

Contact Dashed where approximately located; short dashed where inferred

Fault, showing dip Dashed where approximately located; dotted where concealed; queried where doubtful. U, upthrown side; D, downthrown

Lineament Lines seen on aertal photographs. Thought to be joints

Anticline Syncline

Showing trace of axial plane and direction of plunge; dashed where approximately located; dotted where concealed

Horizontal Inclined Vertical Overturned Strike and dip of beds

> X Prospect adit Gravel quarry

> > REFERENCES

Baker, A. A., Dane, C. H., and Reeside, J. B., Jr., 1936, Correlation of the Jurassic Formations of parts of Utah, Arizona, New Mexico and Colorado: U.S. Geol. Survey Prof. Paper 183, 63 p. Bryant, Bruce, 1969, Geologic map of the Aspen quadrangle, Pitkin County, Colo.: U.S. Geol. Survey open-file

, 1970, Geologic map of the Highland Peak quadrangle, Pitkin County, Colo.: U.S. Geol. Survey open-file report.

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C.1 This map is preliminary and has not been edited or reviewed for conformity with U. S. Geological Survey standards and nomenclature.

Qalo Older alluvium Alluvium, mostly in tributaries; oldest parts probably as old as gravel unit C (Ogc); downstream parts undergoing erosion. Includes small areas of colluvium

Mostly clay and sand deposited by sheetwash; includes transported and residual soil Qma

ambo

Qmd

Morainal deposits

Very poorly sorted debris with boulders

trix of sand and clay

(Bryant, 1970)

weathered boulders

as much as 12 feet in length in a ma-

Qma, the youngest moraine, a recessional

moraine within moraine unit Qmb

Ombc, undifferentiated equivalent of

Qmd, oldest moraine, contains deeply

moraine units Qmb and Qmc (Bryant,

Grave1 Poorly sorted gravel and sand; largely of glaciofluvial origin

Og, undifferentiated gravel in small deposits not correlated with moraine or terrace deposits Qga, Qgb, and Qgc form well-developed terraces; Oga is the youngest

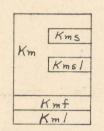
Ogd, eroded gravel remnant no longer showing terrace form. Overprint pattern indicates unit contains boulders of Quaternary basalt (Qb). Isolated overprint on other formations, very small remnants with basalt boulder

Basalt Dark-gray olivine basalt in at least 12 flows, many with vesicular tops, some columnar jointing. Above flows is poorly exposed scoria that probably is an eroded scoria cone. Flows total about 500 feet thick

Older gravel Poorly sorted gravel with sand matrix, deeply weathered; contains cobbles of basalt, older than Quaternary basalt (Qb), which crumble readily. Possibly glaciofluvial equivalent of oldest glacial depost (Qme) in Aspen quadrangle (Bryant, 1969)

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Mesaverde(?) Formation Poorly exposed light-gray fine-grained sandstone; weathers grayish yellow; low-angle cross-laminations. Partial thickness of about 125 feet preserved in quadrangle



Mancos Shale Km, main body: dark-gray shale and silty to sandy shale; minor very thin bentonite beds; zones of concretions common, especially in lower-two-thirds of unit. About 4,750 feet thick

Kms, upper sandstone member: medium-gray fine-grained clayey sandstone; weathers grayish yellow; some beds with low-angle cross-laminations; uppermost few feet contain phosphatic nodules; grades downward into dark-gray sandy shale; wedges out westward. Probably deposited as an offshore bar. About 40 feet thick in eastern exposures

Kmsl, lower sandstone member: medium-gray fine-grained clayey sandstone; weathers grayish-yellow. The map unit is a yellowish-weathering part of a thicker zone of medium-gray clayey sandstone and sandy shale. Unit may cross bedding planes. About 80 feet thick Kmf, Fort Hays Limestone Member: dark-gray limestone

in beds 1-2 feet thick; weathers light gray; contains thin interbeds of limy shale. About 40 feet thick Kml, lower shale member: dark-gray silty shale. About 400 feet thick

Yellowish-gray medium-grained quartzose sandstone, moderately sorted in well-cemented thick beds; poorly exposed interbeds of medium-gray sandy claystone. About 200 feet thick

Dakota Sandstone

K b

Burro Canyon Formation Yellowish-gray medium-grained quartzose sandstone, moderately sorted with streaks of pebbles, sparse streaks of green and red chert pebbles; poorly exposed interbeds of greenish-gray claystone. About 225 feet thick

Morrison and Curtis Formations Greenish-gray and grayish red silty and sandy thickbedded claystone which contains thin to thick beds of yellowish-gray fine- to medium-grained sandstone and minor thin beds of greenish-gray limestone. At base of Morrison there is a thick medium-dark-gray mostly oolitic limestone which rests on a similar limestone, about 6 feet thick, identified as Curtis Formation by Baker, Dane, and Reeside (1936, p. 19). About 300 feet thick

Je

Entrada Sandstone Yellowish-gray medium-grained quartzose sandstone, some coarse grains of high sphericity; in thick cross-laminated beds. 75 to 150 feet thick

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Chinle Formation Dark-reddish-brown siltstone without obvious bedding, hackly weathering; near base a few thin quartzose angular pebbly sandstone beds and some purplish mottling. Thickens eastward from about 200 feet to about 1,000 feet

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Colorado (Woody Creek and Ruedi quads.). Geol. 1:20,000. 1970.

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- ALTON WILL

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