6. Siltstone with subordinate thin beds and scour fills of arkose, like units 8 and 7 respectively in texture, composition, and color; both rock types sparsely micaceous, thinly laminated to thin-bedded; many beds cross-stratified on small scale; channels, 3 to 24 in. wide, scoured into siltstone and filled with slightly coarser arkose are abundant; slabby partings at 2- to 10- in. intervals prominently defined by shaly seams; most partings are undulatory and reflect splitting along minor cross-laminae and along bedding planes folded by compaction adjacent to channel fills in preference to splitting along principal bedding planes; shaly parting common in siltstone beds; stylolites abundant; weathered arkoses and siltstones assume porcelaneous texture. Weathered slabs, stained grayish red, thickly cover moderate slope, which steepens upward locally to almost vertical cliff - - - - - - - - - - - - - - - - - - - - - - 54

5. Arkose, like unit 7, with minor beds of siltstone like unit 8, except moderately micaceous. Basal 6 ft of dusky red weathering, especially micaceous thin-bedded arkose, which grades upward into shaly siltstone that dominates interval 6-14 ft above base. Interval 14-23 ft above base of abundantly hematite-flecked (in outcrop) arkose in beds 6 to 30 in. thick. Upper 27 ft of 2- to 8- in. beds of arkose, with subordinate thinner beds of siltstone; both exhibit abundant stylolites; this subunit forms prominent hacky fractured ledge that caps slope-forming basal 23 ft - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 50

Thickness of upper member (units 5-9) - - - - - - - - - - - 334

Lower member:

4. Quartzite, feldspathic, grayish-orange pink to pale yellowish-brown, medium-grained; weathers pale yellowish-brown; crops as massive rim-forming cliff the surface of which is slightly etched to suggest large-scale, low-angle thin cross-stratification; poorly defined partings at intervals 2 to 15 ft (average 6 ft) suggest tabular bedding units, otherwise bedding structure obscure. Outcrops of basal 10 ft and uppermost 20 ft tend to be "pockmarked". Bottom 8 ft and top 12 ft slightly less feldspathic than rest. White quartz pebbles, up to 1/2 in. diameter, and irregular disks of white-weathering chert, as much as 1 in. diameter, sparse in interval 20 to 30 ft above base; in adjacent areas like pebbles exist through thicker interval. Contact with upper member sharp and planar - - - - - - - - - - - - - - - - - - - - - 65

3. Arkose, light brown to pale reddish-brown, fine-grained, in thinly laminated sets of beds 4 to 6 in. thick; breaks with quartzitic fracture; composition like unit 2, but appears more vitreous on fresh fracture; crops everywhere as steep to vertical cliff that exhibits partings at intervals of 1 in. to 15 ft (most at intervals greater than 6 ft); weather pale red to pale reddish-brown, on fresh break weathered arkose exhibits minute patches of yellowish-orange clay (?). Within top 8 ft medium-scale, low-angle cross-stratification noted; possibly obscure apparent flat-bedding of entire unit represents large-scale, low-angle cross-stratification - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 81

2. Arkose, moderate reddish-orange, fine- to medium-grained, thin- to thick-bedded (1 to 4 ft), breaks with quartzitic fracture; small- to medium-scale straight and concave planar cross-stratification etched out locally; concave cross-bedding noted particularly in upper 20 ft, straight cross-bedding apparently dominant in lower 50 feet; asymmetric ripple marks sparse. Crops as bare rounded ledges with prominent partings at 51, 116, and 134 (top) ft above base of unit; slope of upper 80 ft steeper than that of lower 50 ft; in lower 50 ft of outcrop obscure partings at intervals of 2 in. to 4 ft (mostly latter); obscure partings of upper 80 feet at intervals of 1 to 8 ft (typically at 4 to 6 ft).

Comprised of angular to subrounded grains of clear quartz and reddish-orange potash-feldspar (30-40 percent of rock); scattered minute aggregates of hematite common; minute patches (seen with hand lens) of porous, dark yellowish-orange limonite or limonitic clay characterize matrix of freshly broken weathered rock - 134

1. Conglomerate (Barnes bed), of well-rounded pebbles and cobbles ranging from 1/2 to 8 in. in diameter (average 3 in.) in matrix of coarse- to very coarse-grained, light brown to grayish-red arkose. Gravels mainly of dark gray to grayish-orange and dusky red, fine-grained, vitreous quartzite, pebbles of white quartz flecked with hematite common, pebbles of reddish-brown jasper and volcanic rock (andesite?) rare. Sparse lenses of matrix sandstone exist within unit. Crops as one massive ledge; to east across canyon unit from 1 to 8 ft thick. Contact with Pioneer shale shape and slightly undulant - - - - - - - - - - - - - - - - - - - - - - - 18

Thickness of lower member (units 1-4) - - - - - - - - - - - - 298

Thickness of Dripping Spring quartzite - - - - - - - - - - - - 632

Unconformity.

Pioneer shale:

Siltstone, grayish-red with yellowish-gray to light brown reduction spots, abundantly tuffaceous (as seen in thin-section), forms steep slope; top 2 ft shaly parting and bleached light greenish gray - - - - - - - - - - - - - - - - - - - - - 30+