

Tertiary System

Eocene Series

BUCK HILL GROUP

Pruett Formation

Name and type section--Goldich and Elms (1949) named the Pruett from exposures near the Pruett Ranch in the north-central part of the Buck Hill Quadrangle. There the Pruett consists mostly of tuff, but "includes conglomerate, tuffaceous sandstone and breccia, and tuffaceous freshwater limestone," and intercalated trachyte, basalt and andesite flows. In the Buck Hill Quadrangle, the Pruett unconformably overlies the Boquillas and in some places the Pen, and is 274-305 m (900-1000 ft) thick.

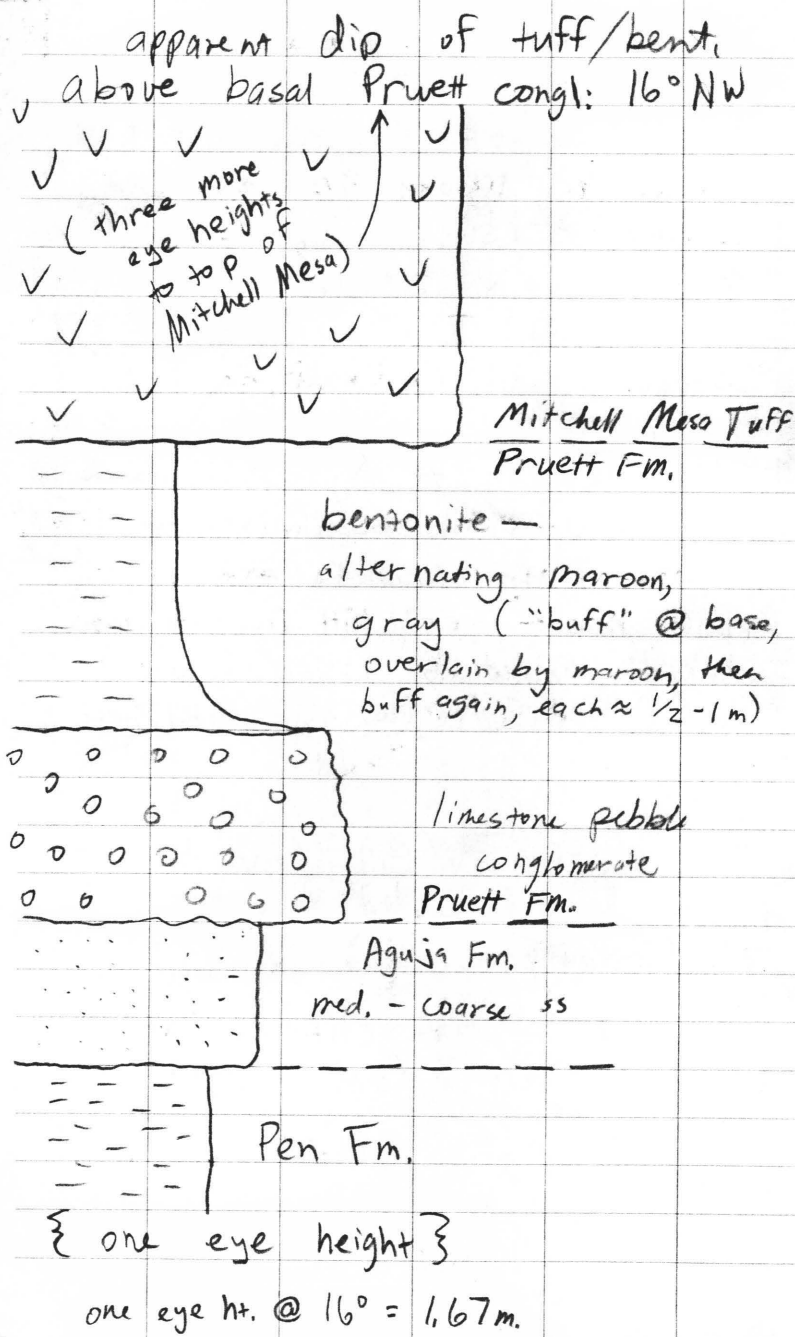
Distribution, thickness, and lithology--The Pruett is exposed only in the extreme northern part of the quadrangle, as small outliers on down-thrown sides of faults. It lies unconformably on the Pen Formation, and with the Pen forms a slope beneath the Mitchell Mesa Tuff and/or diabase sills. In the Yellow Hill Quadrangle, the Pruett consists of a basal limestone-pebble and cobble conglomerate, overlain by calclithite sandstone with minor amounts of interbedded gray and maroon tuff and bentonite. One maroon bentonite bed in the Pruett north of Hill 3964 (NC) contains white chalky limestone nodules.

The thickness of the Pruett was not measured because the section is incomplete, and outcrops are small and isolated. Many outcrops consist only of basal conglomerate and the sandstone immediately above, but some include sandstone, tuff, and bentonite up to the overlying Mitchell Mesa Tuff.

Less than one kilometer north of the quadrangle, 0.75 km east of Mesquite Tank in the Agua Fria Quadrangle, a thin section of Pruett capped by Mitchell Mesa is exposed in a cliff above the Pen Formation. The estimated thickness of the Pruett there is 9 m, and includes about 3 m of basal conglomerate.

The estimated thickness of the Pruett in the Yellow Hill Quadrangle is 10 to 40 m; this variation in thickness may have been produced by recent erosion.

⊗ Both numbers are ~~too~~ small by a factor of ~ 2 . I measured the section on 25 May 1981 and got 16.7 m of Pruett including 6.7 m of basal conglomerate. *RPM* [Note also 5 m of Aguja Fm.]



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ERRATA: *Geology of Yellow Hill Quadrangle, Brewster County, Texas* (McCulloh, 1977)

TEXT [not a comprehensive list of text issues, rather mostly those I saw fit to mark on my hard copy]:

page	correction
xi	insert "ILLUSTRATIONS" above " <u>Frontispiece</u> "
1	insert a second sentence in the first paragraph under <u>Climate and Vegetation</u> : "Most of the following section was written based on a close following of (1) the <u>Vegetation</u> section of Maxwell (1968), and (2) the guide to wildflowers written by Warnock (1970), during the course of the field work."
20	change "limonite strain" to read "limonite stain" [5 th line from bottom]
38	change "about 3-5 m" to read "about 305 m" [line 11]
47	change "subaerial" to read "subaqueous" [line 3]
96-114	change numerous instances in the STRUCTURAL GEOLOGY chapter of <i>trend(s)/trending</i> to the appropriate and correct term <i>strike(s)/striking</i> , e.g., on p. 109 change "trends N 20° W" to read "strikes N 20° W" [line 3 under "Clastic Dike"]
112	change "Structural History" to read "Cenozoic Structural History" [section heading]
122	insert bibliographic entry for Maxwell (1968)
124	insert bibliographic entry for Warnock (1970)

PLATE I MAP [locations formatted by 2.5' quadrangle subdivisions; additional comments and queries marked on the file YellowHillGeol_AddCorrectComment.tif]:

NW: The bend from overall N-S to E-W strike shown by the **Ksp** outcrop near the quadrangle boundary south of Hill 4410 appears extreme, and probably does not "V" as dramatically as the "kink" shown on the map (which in fact is not fitted to the Lefthand Shutup thalweg); and the area where **Tcb** is mapped southwest of Hill 4013 and southeast of Hill 4242 has more knobs than shown, plus a small isolated **Kbo** slump feature or remnant directly north of the largest knob depicted.

NE: The **Qal** contacts with **Tid** and **Kbo** on the east side/bank of Terlingua Creek, along its southernmost reach in the quadrangle near the eastern quadrangle boundary, lie farther east than shown.

C: The fault depicted in **Qal** south of Hill 3473 (and south of the western end of "Airstrip") should be dotted.

EC: Two apparent **Tid** plugs north of Saltgrass Draw and southeast of Hill 3252 (mapped from air photos after the completion of field work?) are probably just diabase gravel in surface terrace material.

SW: A small **Kbu** outlier at the southeastern corner of a fault block west-southwest of Hill 3817 was not mapped; the **Kdr** distributions mapped may include some alluvial/terrace material; and the axis of the Terlingua-Solitario anticline depicted in the southwestern corner should be dashed, as its location and orientation were not known to me with certainty.

SC: The plunging syncline that includes Hill 3735 is mapped as **Kbu**, but some **Kbo** also is present near its southern end; the **Kdr** distributions mapped may include some

alluvial/terrace material; and the northern of two closely spaced NE-striking faults near the southwestern end of the A–A' line of section is not valid.

SE: A small **Tid** polygon southeast of Hill 3590 was not mapped; and the label is missing from a small fault-bounded **Kp** polygon northwest of Hill 3274.

PLATE I CROSS SECTIONS [additional comments and queries marked on the file YellowHillGeol_AddCorrectComment.tif]:

A–A': The base of **Kgr** is missing at the southwestern end of one fault block. The third and fourth faults on the line also should be remapped; the third fault (see SC, above), which the section shows as the main fault of the two, is not valid, and the fourth fault shown should be the main and only fault.

B–B': The **Kp** label for the surface unit in the fault block directly southwest of the trap-door dome near the eastern quadrangle boundary is missing a lead line.

C–C': The southwestern portion depicts hypothetical subsurface faults possibly formed in association with the uplift of the Solitario dome. The southwesternmost of these faults is shown as displacing the rim sill, which may conflict with the ages given in the text (p. 98): the dome uplift is inferred to have been Middle Eocene, whereas the rim sill age is given as 36.6 ± 1.6 Ma (Middle to Late Eocene). [This may reflect an episode of trance state during drafting.]

References:

Maxwell, R. A., 1968, The Big Bend of the Rio Grande: A guide to the rocks, landscape, geologic history, and settlers of the area of Big Bend National Park: Guidebook 7, University of Texas Bureau of Economic Geology, 138 p.

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