Figure 4

EXPLANATION

Explanation of Outcropping (Surface) Paleozoic and Precambrian Units

Pennsylvanian—Smithwick Formation which functions as a confining bed.

Pennsylvanian—Marble Falls Formation which functions as an aquifer. Area shown is outcrop which is the main recharge area of the aquifer.

Ordovician and Cambrian—Ellenburger Group and San Saba Member of the Wilberns Formation which function as an aquifer. Area shown is outcrop which is the main recharge area of the aquifer.

Cambrian—Point Peak,Morgan Creek, and Welge Members of the Wilberns Formation and Lion Mountain and Cap Mountain Members of the Riley Formation. Point Peak and Morgan Creek Members function as confining beds. Welge and Lion Mountain Members function as the Mid—Cambrian aquifer. Cap Mountain Member functions as a confining bed. The red line is the geologic contact between the Welge and Lion Mountain Members and is the general location of there outcrops which are the main recharge areas of the Mid—Cambrian aquifer.

Cambrian—Hickory Member of the Riley Formation which functions as an aquifer. Area shown is the main recharge area of the aquifer.

Precambrian igneous and metamorphic rocks undifferentiated which function as confining beds.

Surface geologic contact between Cretaceous rocks and various Paleozoic and Precambrian outcrop rocks described in the various explanations above.

Explanation of Paleozoic and Precambrian Units Subcropping (Underlying) Cretaceous Rocks

Paleozoic and Precambrian (?) Ouachita Facies rocks undifferentiated.

Paleozoic Foreland Facies rocks undifferentiated which include the Smithwick Formation and younger rocks of the upper Paleozoic.

Marble Falls Aquifer

Ellenburger—San Saba Aquifer

Line with shaded triangle pointed inward delineates area where adequate data is not available, but the Ellenburger—San Saba and/or Marble Falls Aquifers are believed to subcrop (underlie) Cretaceous rocks in this area. Lines with question marks (?) indicate an approximate geologic contact. Continuous or dashed lines with open (unshaded) triangles indicate approximate downdip (southeastern, southern and southwestern) subsurfaces limit of slightly saline water in the Ellenburger—San Saba and Marble Falls aquifers.

Mid—Cambrian Aquifer

Hickory Aquifer (Locally may have Cap Mountain Member between Cretaceous rocks and Hickory Member)

Cretaceous rocks are underlain by Cap Mountain Member which is overlying and confining the Hickory Aquifer.

Line with hacture lines inward delineates area where adequate data is not available, but the Hickory Aquifer is believed to be the dominant aquifer subcropping (underlying) Cretaceous rocks. The Ellenburger—San Saba and Mid—Cambrian aquifers maybe locally present and encountered below the Cretaceous rocks in this area.

Line with dot and hacture line indicates the approximate downdip (southeastern,southern and southwestern) subsurface limit of slightly saline water in the Hickory Aquifer.

Local area where Cap Mountain Member underlies Cretaceous rocks and directly overlies Precambrian "Knob".

Local area where undifferentiated Cambrian limestone underlies Cretaceous rocks and directly overlies Precambrian "Knob".

Precambrian igneous and metamorphic rocks undifferentiated.

Thrust fault approximately indicating contact between Paleozoic Foreland Facies rocks and Paleozoic Ouachita Facies rocks subcropping (underlying) Cretaceous rocks. Open (unshaded) triangle is on upthrown side of fault and point of triangle touching line generally indicates direction of thrusting.

Inferred subsurface fault trace subcropping (underlying) Cretaceous rocks.