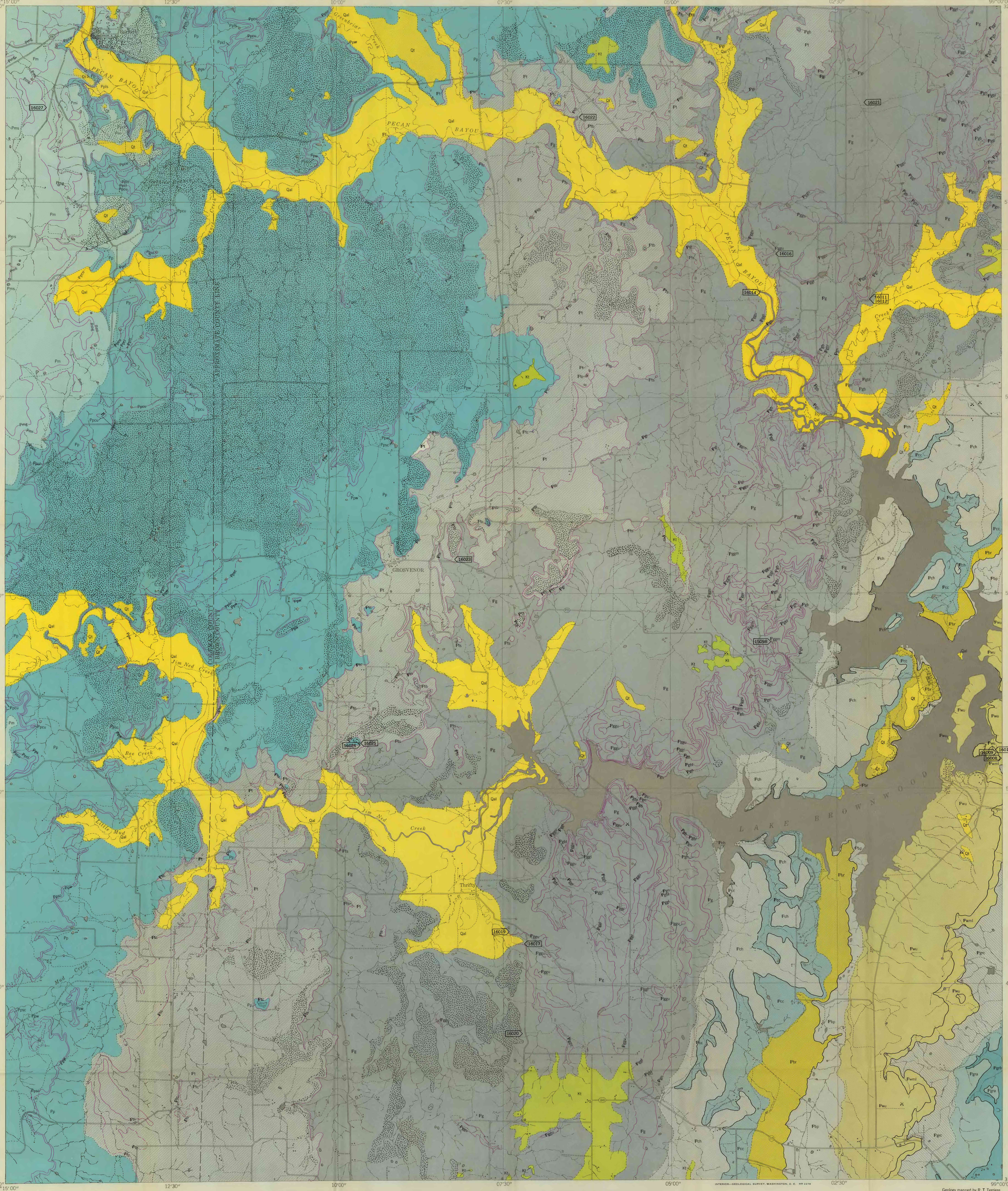

Planimetric base compiled by radial line methods from air photographs flown in 1938 and 1948

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C. MR 2278

Geology mapped by R. T. Terriere, 1951–55

EXPLANATION

QUATERNARY

Qal — Alluvium

Qt — Terrace gravels

CRETACEOUS

Kt — Sandstone, conglomerate, siltstone, and claystone

PERMIAN

Trinity group

Pms, Pm, Pmg, Pmi

Moran formation

Gray to red shale interbedded with limestone and minor amounts of siltstone and sandstone, Pm. *Lines and symbols mark the bases of conspicuous limestone units: Sedwick limestone member,* Pms; *Gouldbusk limestone member,* Pmg; *and the so-called Bee limestone bed of the Waits Creek shale member,* Pmi

Wichita group

Ppcu, Ppls, Pp, Ppct, Pps, Ppsc, Ppw

Pueblo formation

Gray to red shale interbedded with thin limestone and thick channel-filling sandstone, Pp. *Lines and symbols mark the bases of conspicuous limestone units: upper limestone bed of Camp Colorado limestone member,* Ppcu; *lower limestone bed of Camp Colorado limestone member,* Ppcl; *limestone bed in Salt Creek Bend shale member,* Ppls; *Stockwether limestone member,* Pps; *Saddle Creek limestone member,* Ppsc; *and Waldrip No. 3 bed of Drake in Waldrip shale member,* Ppw

PENNSYLVANIAN — CARBONIFEROUS

Cisco group

Pt, Ptc, Ptb, Pts

Thrifty formation

Gray to red shale containing smaller amounts of siltstone and sandstone and thin limestone units, Pt. *Lines and symbols mark the bases of conspicuous limestone units: Chaffin limestone member,* Ptc; *Breckenridge limestone member,* Ptb; *and Speck Mountain limestone member,* Pts

Pg, Pggu, Pggm, Pgg, Pgb, Pgbl, Pgn, Pgbl, Pgu

Graham formation

Gray shale interbedded with thin limestone and minor amounts of red shale, siltstone, and sandstone, Pg. *Lines and symbols mark the bases of conspicuous limestone units: Ivan limestone member,* Pgi; *upper limestone bed of Gunsight limestone member,* Pggu; *limestone bed near middle of Gunsight limestone member,* Pggm; *lower limestone bed of Gunsight limestone member,* Pgg; *so-called Bunger limestone bed of Bluff Creek shale member,* Pgb; *unnamed limestone bed in Bluff Creek shale member,* Pgbl; *so-called North Leon limestone bed of Bluff Creek shale member,* Pgn; *and unnamed limestone bed in Bluff Creek shale member,* Pgu

Pch, Pcc

Caddo Creek formation

Home Creek limestone member, Pch, *thick-bedded light-gray limestone; Colony Creek shale member,* Pcc, *gray shale containing minor amounts of sandstone*

Canyon group

Pbr, Pbp

Brad formation

Ranger limestone member, Pbr, *medium-thick beds of gray limestone; Placid shale member,* Pbp, *gray to red shale containing minor amounts of sandstone*

Pwu, Pwml

Winchell formation

Upper limestone member, Pwu, *two relatively thick beds of limestone separated by shale; middle shale and lower limestone members,* Pwml, *gray to red shale in middle member, and four thin limestone units separated by shale in lower member*

Pgrc, Pgra, Pgrb

Graford formation

Cedarton shale member, Pgrc, *gray to red shale containing minor amounts of sandstone; Adams Branch limestone member,* Pgra, *thin-bedded limestone passing northeastward into interbedded limestone and shale; Brownwood shale member,* Pgrb, *gray to red shale interbedded with small amounts of sandstone*

Channel-fill deposits, mostly sandstone, in Moran, Pueblo, Thrifty, and Graham formations

Contact

Dashed where approximate, dotted under alluvium. Where a formational contact coincides with the base of a limestone or of a channel deposit, the base of the limestone or channel deposit is shown

Base of a limestone unit

Dashed where approximate; dotted under alluvium; queried where continuity of bed questionable

Gravel pit

16008 — Fossil-collecting locality

Numbers refer to U. S. Geological Survey collection

GEOLOGIC MAP OF THE GROSVENOR QUADRANGLE, TEXAS

Scale 1:31 680

1 0 1 2 3 Miles