THE UNIVERSITY OF TEXAS AT AUSTIN
BUREAU OF ECONOMIC GEOLOGY
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GEOLOGIC QUADRANGLE MAP NO. 37
BOFECILLOS MOUNTAINS AREA
PLATE I

EXPLANATION

QUATERNARY

Qc
Colluvium

Qalr | Qals | Qal
Alluvium
Qalr, *Rio Grande deposits;* Qals, *deposits of side streams graded to Rio Grande;* Qal, *undifferentiated alluvium*

Qg$_4$ | Qg$_3$ | Qg$_2$ | Qg$_1$ | Qg
Gravel
Pediment and terrace gravel, Qg$_1$ *(oldest and highest) through* Qg$_4$*; undifferentiated pediment and terrace gravel,* Qg

TERTIARY

QTf
Bolson fill
Salmon-pink conglomeratic sandstone

S
Chalcedonic silica
Fissure veins and replacement deposits

Relative age not indicated by order of listing

Intrusive rock

Tibr
Tibr, *intrusive breccia around Bofecillos vent*

Tiv
Tiv, *vent rock; weathered, hydrothermally altered latite and pyroclastic material of Bofecillos vent*

Ti
Tib, *basalt;* Tig, *gabbro;* Tibp, *trachybasalt porphyry;* Tidg, *diorite and gabbro of Contrabando and Lajitas Lowlands;* Tid, *syenodiorite adjacent to Bofecillos vent;* Tia, *trachyandesite;* Til, *latite;* Tilp, *latite porphyry;* Titr, *trachyte;* Tir, *rhyolite;* Tirp, *rhyolite porphyry;* Tirr, *riebeckite rhyolite.*

Rawls Formation

Tr$_{9f}$ | Tr$_9$ | Tr$_{9b}$
Member 9: Tr$_9$, *undifferentiated conglomerate, sandstone, and tuff;* Tr$_{9b}$, *basalt;* Tr$_{9f}$, *bolson fill interbedded with undifferentiated member 9*

Tr$_{8tr}$ | Tr$_{8a}$ | Tr$_{8lp}$ | Tr$_{8bp}$
Member 8: Tr$_{8tr}$, *trachyte;* Tr$_{8a}$, *trachyandesite;* Tr$_{8lp}$, *latite porphyry;* Tr$_{8bp}$, *trachybasalt porphyry*

Tr$_{7lp}$ | Tr$_{7at}$
Member 7: Tr$_{7at}$, *nonwelded to thoroughly welded crystal-vitric to lithic-vitric ash-flow tuff,* Tr$_{7lp}$, *latite porphyry*

Member 6: Trachyte; not present in map area; mapped by Dietrich (1965) in Presidio area to north

Tr$_{5a}$ | Tr$_{5b}$ | Tr$_{5bp}$ | Tr$_{5lp}$
Member 5: Tr$_{5b}$, *basalt;* Tr$_{5a}$, *trachyandesite;* Tr$_{5lp}$, *latite porphyry;* Tr$_{5bp}$, *trachybasalt porphyry*

Tr$_{4bp}$ | Tr$_{4a}$
Member 4: Tr$_{4bp}$, *trachybasalt porphyry;* Tr$_{4a}$, *trachyandesite*

Tr$_{3lp}$
Member 3: latite porphyry

Tr$_{2lp}$ | Tr$_{2vm}$ | Tr$_{2l}$ | Tr$_{2t}$
Member 2: Tr$_{2t}$, *tuff;* Tr$_{2lp}$, *latite porphyry;* Tr$_{2vm}$, *volcanic mud-flow;* Tr$_{2l}$, *latite*

Tr$_{1b}$ | Tr$_1$ | Tr$_{1bp}$
Member 1: Tr$_{1b}$, *basalt;* Tr$_1$, *tuff, sandstone, and conglomerate;* Tr$_{1bp}$, *trachybasalt porphyry*

Ts
Santana Tuff
Nonwelded to thoroughly welded vitric-crystal ash-flow tuff

Tfb | Tflp | Tfsr | Tfl | Tfa | Tfvm | Tfat | Tf | Tfbr
Fresno Formation
Tf, *undifferentiated tuff, sandstone, and conglomerate;* Tfa, *mafic trachyandesite;* Tfl, *latite;* Tflp, *latite porphyry;* Tfb, *basalt;* Tfsr, *sodic rhyolite;* Tfvm, *volcanic mud-flow;* Tfat, *ash-flow tuff;* Tfbr, *rhyolite breccia*

Tmm
Mitchell Mesa Tuff
Nonwelded to moderately welded vitric-crystal ash-flow tuff

Tctm | Tcb | Tcm | Tcbm | Tc | Tcac | Tcls
Chisos Formation
Tc, *undifferentiated tuff, conglomerate, sandstone, and mud rock;* Tctm, *Tule Mountain Trachyandesite Porphyry;* Tcb, *Mule Ear Spring Tuff;* Tcbm, *Bee Mountain Basalt;* Tcac, *Alamo Creek Basalt;* Tcls, *nonmarine limestone*

Tj
Jeff Conglomerate
Conglomerate consisting of rounded boulders and cobbles of limestone and interstitial calcareous sandstone

ANGULAR UNCONFORMITY

CRETACEOUS

Gulf Series

Kag
Aguja Formation
Intercalated thin-bedded sandstone and clay

Kp
Pen Formation
Gypsiferous, calcareous clay

Kbo
Boquillas Formation
Interbedded flaggy limestone and clay

Comanche Series

Kbu
Buda Limestone
Massive nodular micritic limestone

Kdr
Del Rio Clay
Calcareous clay

Kse
Santa Elena Limestone
Massive, cherty, rudistid-bearing limestone

Kc
Undifferentiated Comanche Limestone of Rancherias Dome
Massive micritic limestone; partly contact metamorphosed to marble and skarn

Fault
U, upthrown side; D, downthrown side; dotted where concealed, dashed where inferred

Slump fault

Thrust fault
T, *overthrust side*

Anticline
Indicating plunge

45
Strike and dip of bedding

⑪
Measured section and number

Madril
Triangulation station

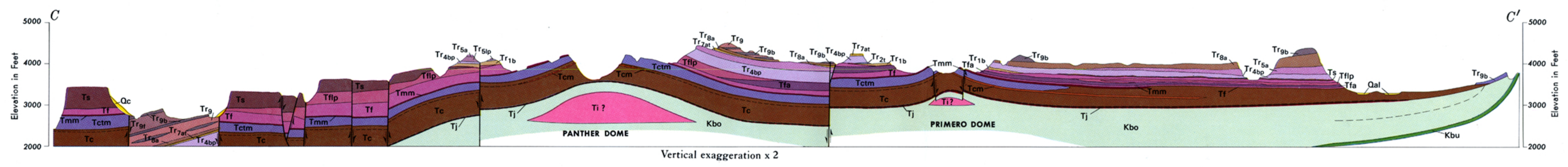
BM 4235
Bench mark and elevation

Windmill

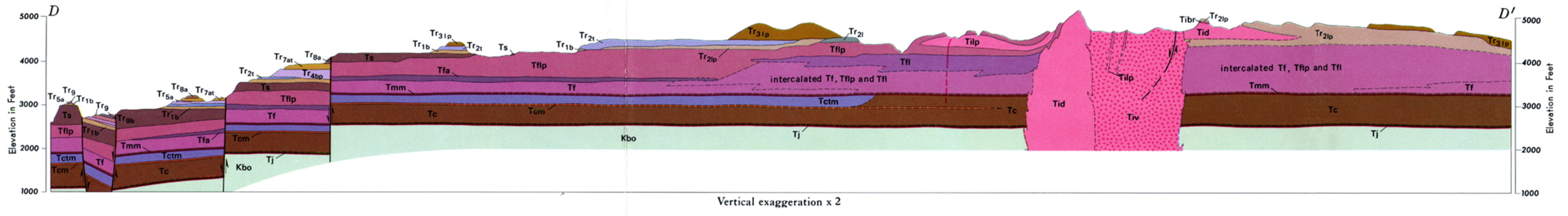
GEOLOGIC MAP OF BOFECILLOS MOUNTAINS AREA, TRANS-PECOS, TEXAS

SCALE 1:48000
0 1 2 3 4 5 Miles

1969



Vertical exaggeration x 2



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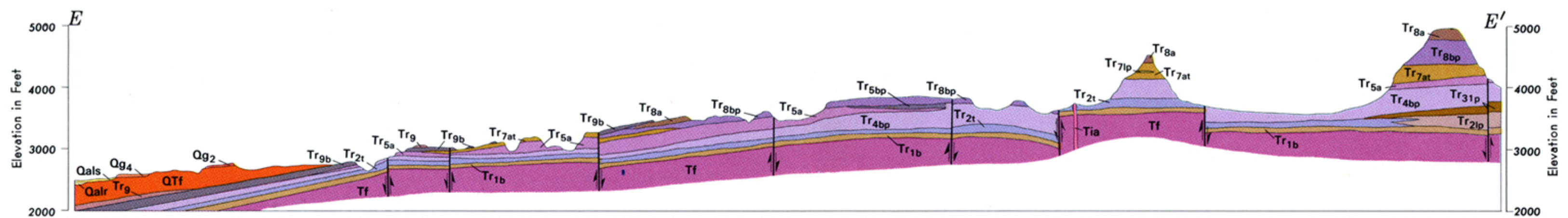

Vertical exaggeration x 2

Base from aerial photographs
Control by U.S.G.S. and U.S.C. & G.S. Polyconic projection
North American Datum

Geology by John F. McKnight.
Photogrammetry by Dan F. Scranton
Cartographer, James W. Macon

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