Geologic map, cross section, and map units of the
Lemitar Mountains, Socorro County, New Mexico
by R. M. Chamberlin, 1982

New Mexico Bureau of Geology and Mineral Resources
Open File Report 169 - Plate I

scale 1 : 12.000

Geology mapped by R.M. Chamberlin, 1975 to 1977

post Santa Fe

Qca — Colluvium and minor alluvium undivided

Qya — Younger alluvium

Qoa — Older alluvium

UNCONFORMITY

Sierra Ladrones Formation

Tslf Fluvial sands of ancestral Rio Grande and tribu
Tslo Overbank mud-silt of ancestral floodplain
Tslp Piedmont-slope and alluvial-fan gravels
Tslc Ancient landslide mega-breccia and colluviu
Tbsh Basalt flows of Sedillo Hill (4.0± 0.3 m.y.)
Tbsht Basaltic pyroclastics consisting of agglomer

facies and basalt flows

UNCONFORMITY

Santa Fe Group

Popotosa Formation

member of Kelly Ranch

Tpkp Mudstone, claystone, siltstone and gypsum, playa/alluvial flat
Tpkf Sandstone and conglomeratic sandstone, fluvial (braided channel)
Tpke Fanglomerates near Evergreen
Tpkr Rhyolite-vitrophyre-rich conglomerates and conglomeratic sandstones around the Grefco "perlite" mine, includes other small outcrops of rhyolitic sandstones and conglomerates locally derived from Socorro Peak Rhyolite lavas
Tpkb Basalt flows, lower flows near Kelley Ranch (9.1± 0.5 m.y.), upper flows near Pound Ranch (vent areas unknown)
Tpkc Basal muddy conglomerates and sandy conglomerates, locally derived from reworking Tpsd, possibly equivalent to Tplb or Tplru

facies and basalt flows

UNCONFORMITY

member of Socorro Cauldron

Tpsd Lahars and fanglomerates shed from resurgent dome area of the Socorro Cauldron
Tpsl Lacustrine and alluvial-flat mudstone, siltstone and sandstone near moat axis
Tpsw Fanglomerate and sandstone shed from caldera walls

facies

late sedimentary fill of the Socorro Cauldron

member of Lemitar Mountains

Tplb Buff fanglo
Local unconform
Tplp Playa/alluv
Tpla Andesite-r
Tplru Upper red f
Local unconformit
Tplrl Lower red f
Tplc Ancient coll
Tplr Undivided T

facies and local units

UNCONFORMITY

Tsc — Tuff of South Canyo (26.2 ± 1.0 m.y.)

Tbaz — Upper basaltic andesite (upper tongue of (?) La Jara Peak basalt time equivalent to the Luis Lop

regional volcanic units which partially fill the Socorro Cauldron and locally top the Luis Lopez formation

Luis Lopez Formation
local volcanic and minor sedimentary moat-fill deposits of the Socorro Cauldron

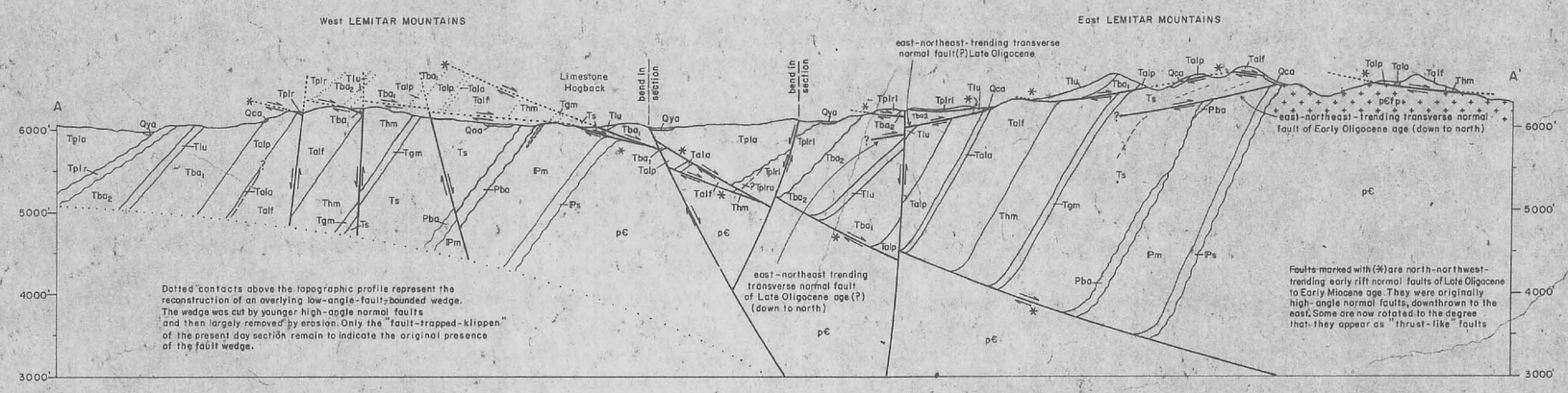
Tlsr Sandstone, red rhyolitic channel
Tlrs Rhyolite domes and flows near Highway Sixty
Tlrsx Rhyolite breccia, ancient colluvium derived from Tlrs
Tlrst Bedded and welded tuffs associated with Tlrs (28.6 ± 1.1 m.y.)
Tla4 Andesite lavas, medium-porphyritic
Tlrb Rhyolite domes and flows near Blue Canyon
Tlrbt Bedded and welded tuffs associated with Tlrb
Tlap Andesite lavas, coarsely porphyritic (feeder dike, 22.8± 0.9 m.y.
Tla3 Andesite lavas, agglomerates, tuffs and andesitic lahoric breccia fine-to medium-porphyritic
Tlt2 Welded, rhyolitic lapilli tuff and tuff breccia with Lemitar Tuff cl
Tla2 Mafic lava (rhyodacite?, andesite?) locally with small quartz phenocrysts, aphanitic to medium-porphyritic
Tlt1 Welded, rhyolitic, lithic-rich lapilli tuff with andesite clasts
Tla1 Andesite lava, aphanitic to medium-porphyritic, with minor "Spears-like" conglomerates at top
Tlst Tuffaceous sandstones and bedded tuffs, light gray rhyolitic
Tlm Landslide mega breccias and ancient colluvium with clasts of Tgm, Ts, Ipm (minor sandstones near top)

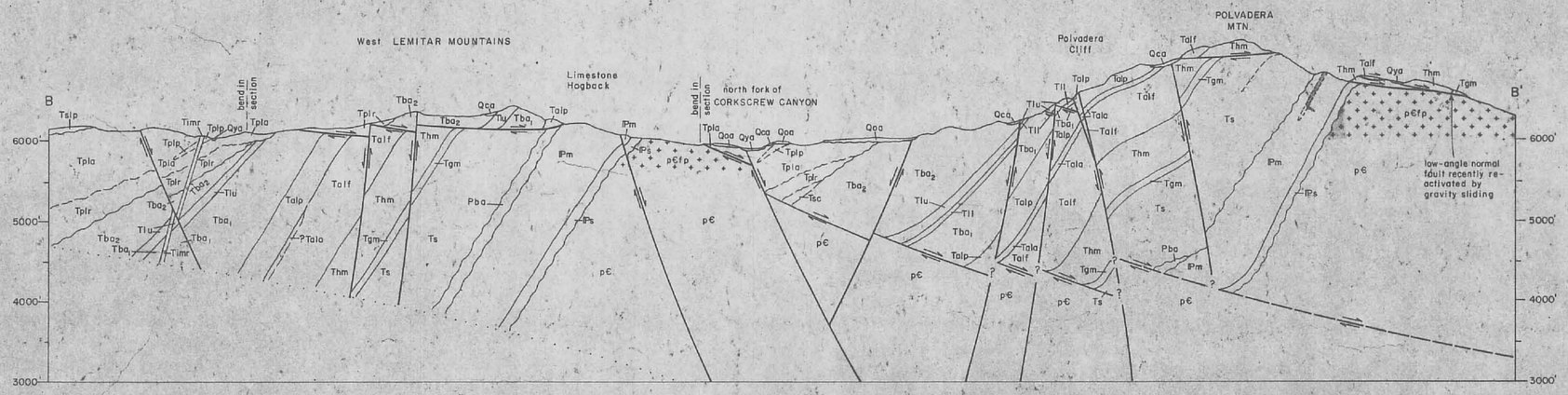
members

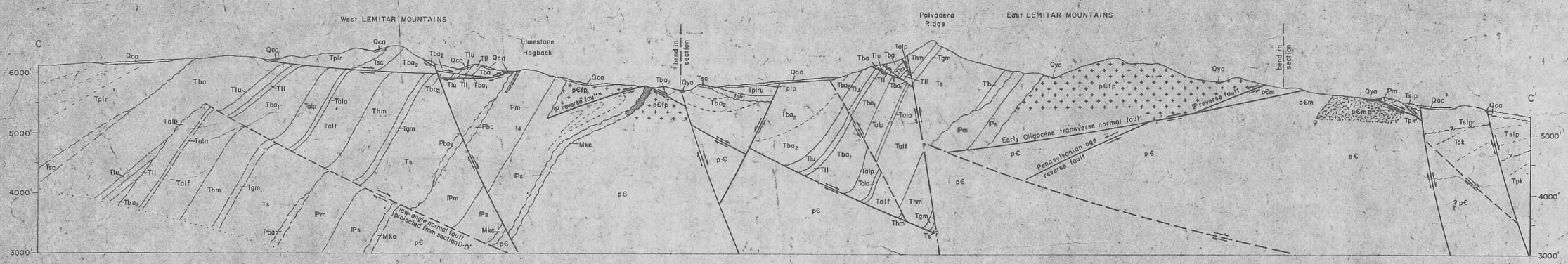
NMBM&MR OF-169

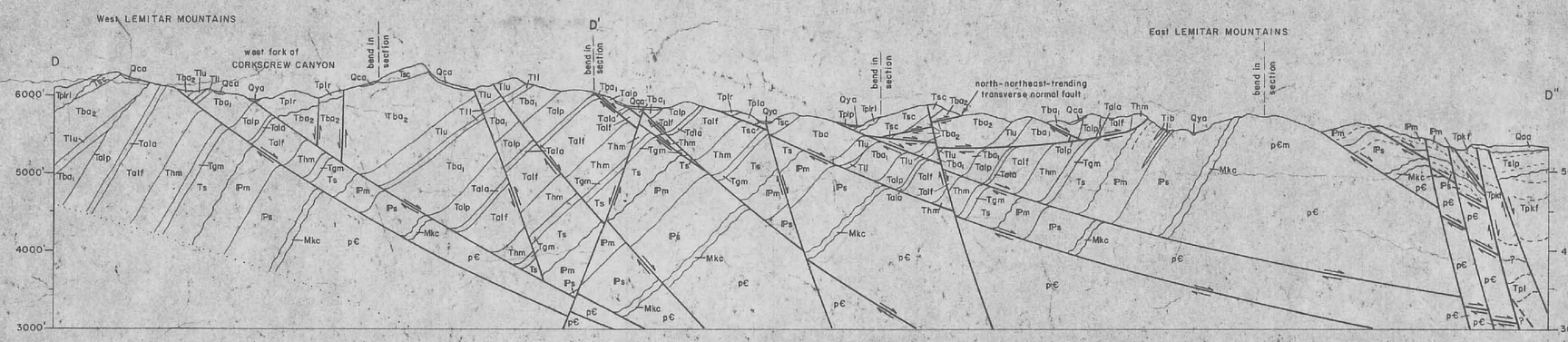
GEOLOGIC CROSS SECTIONS OF THE LEMITAR MOUNTAINS, SOCORRO COUNTY, NEW MEXICO

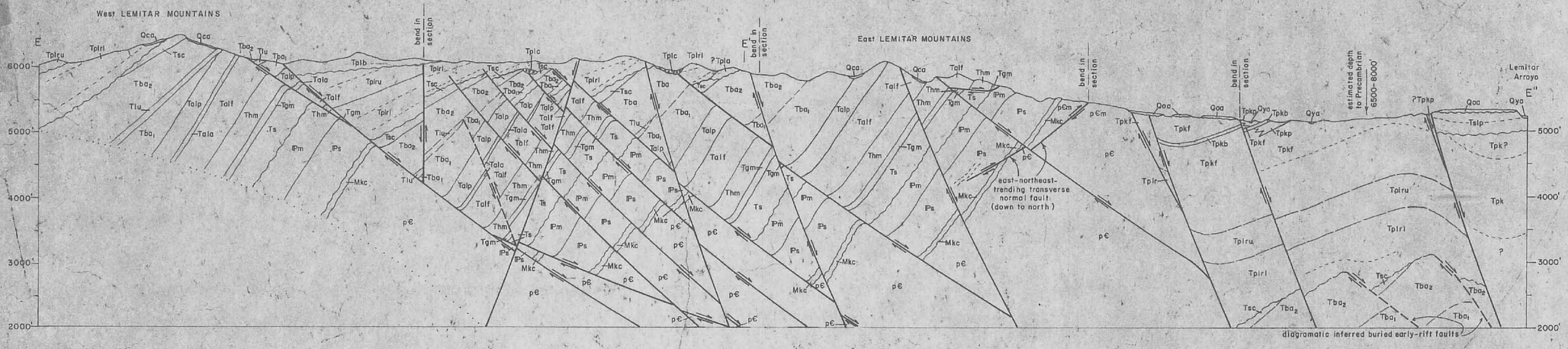
by
Richard M. Chamberlin, 1978

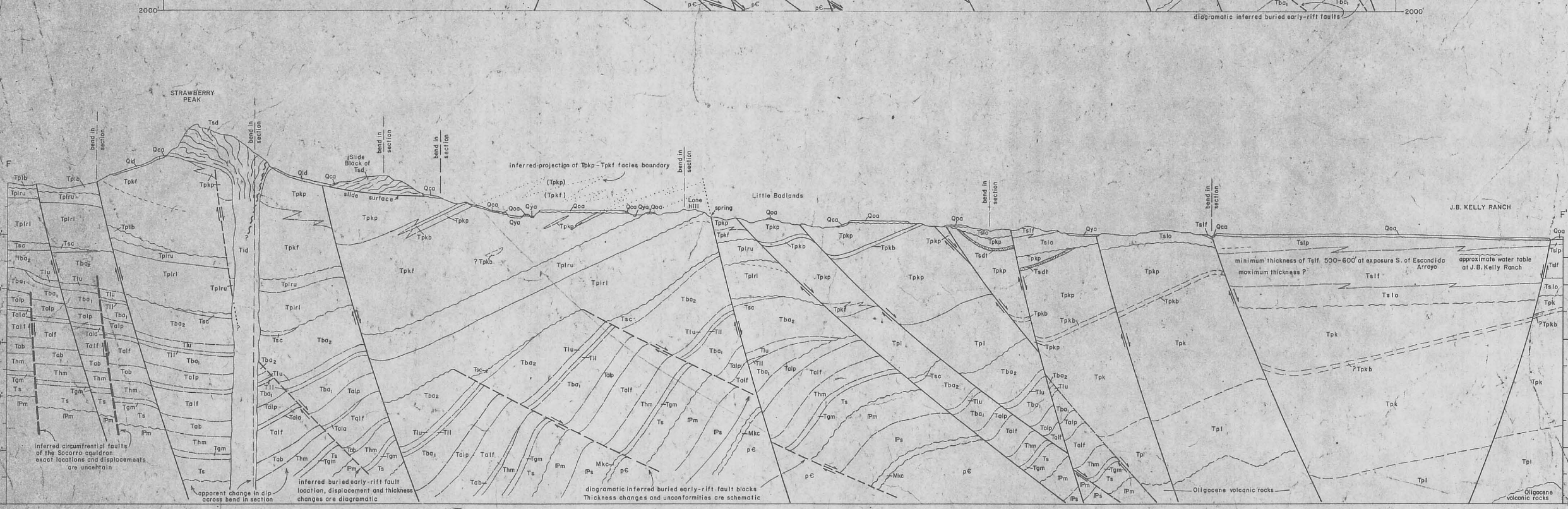












Note: contacts and faults dashed where uncertain; short dashed lines indicate stratification

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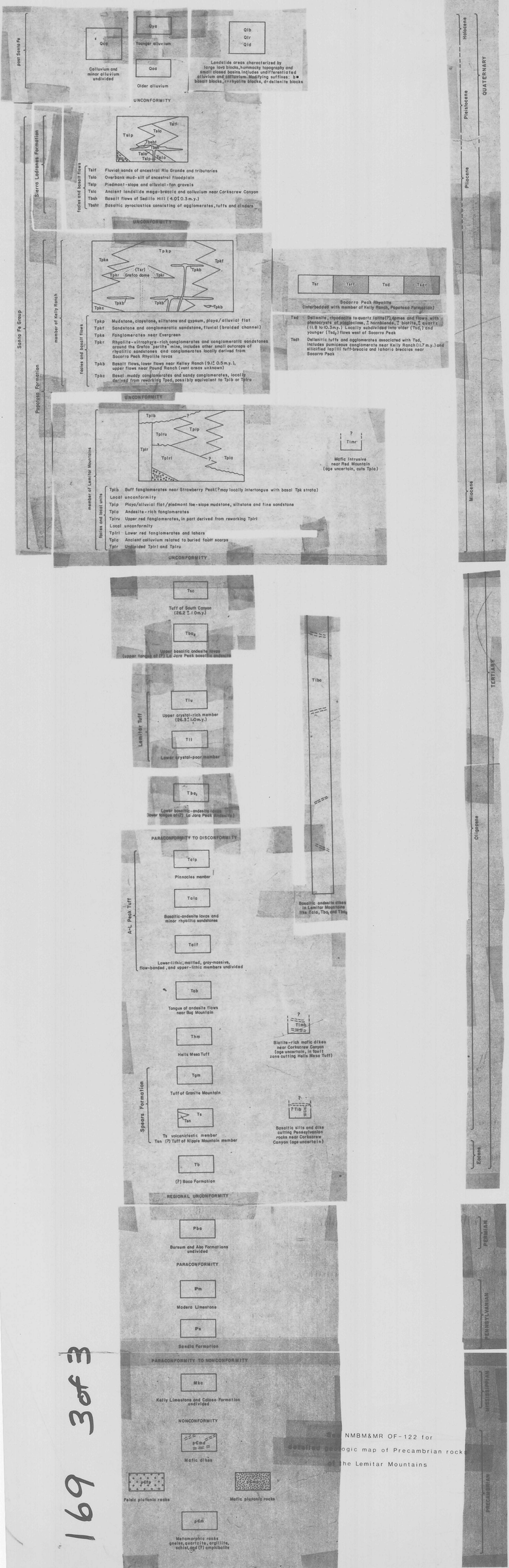
GEOLOGIC MAP OF THE LEMITAR MOUNTAINS SOCORRO COUNTY, NEW MEXICO

by Richard M. Chamberlin, 1978

CORRELATION OF MAP UNITS

(See NMBM&MR OF-118 for detailed description of most map units)



See NMBM&MR OF-122 for detailed geologic map of Precambrian rocks of the Lemitar Mountains

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