

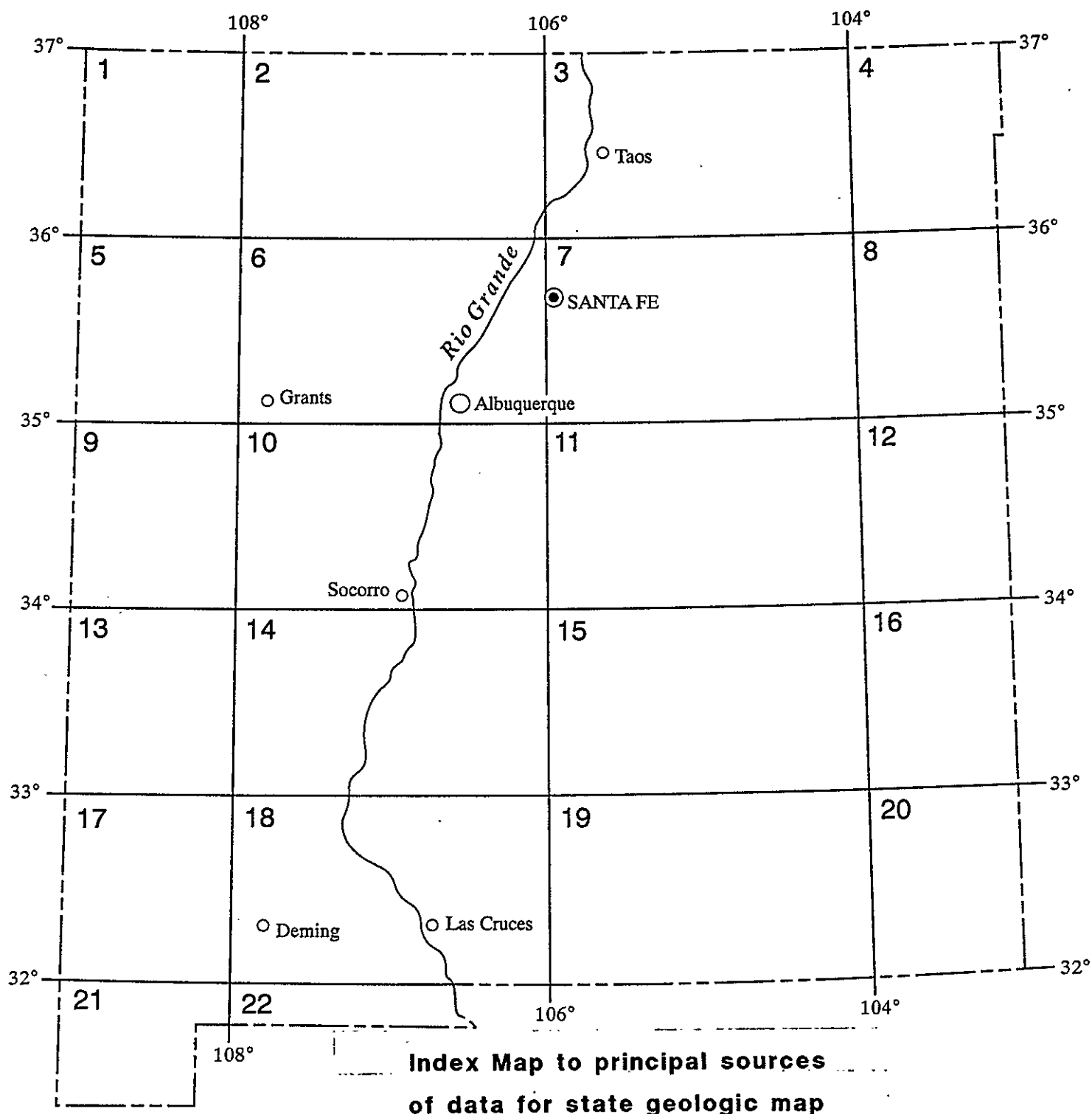
**GEOLOGIC MAP OF  
NEW MEXICO,  
1:500,000**

**NEW MEXICO BUREAU  
OF MINES AND MINERAL  
RESOURCES**

**Open File Report  
No. 408**

**Orin J. Anderson and Glen E. Jones**

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Number at left refers to numbered 1°x2° quadrangles shown in above index map.

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c:\legend\explanat

## Explanation of Map Units

3/25/93

\* 8/5/93

\* 3/10/94

\* 12/16/94

- Qa - Alluvium; Upper and Middle Quaternary
- Ql - Landslide deposits and colluvium
- Qe - Eolian deposits
- Qeg - Gypsiferous eolian deposits
- Qd - Glacial deposits; till and outwash: Upper and Middle Pleistocene
- Qpl - Lacustrine and playa-lake deposits; includes associated alluvial and eolian deposits of major lake basins; Upper Quaternary
- Qp - Piedmont alluvial deposits: Upper and Middle Quaternary; includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans
- Qb - Basalt and andesite flows and vent deposits
- Qr - Silicic volcanics
- Qv - Basaltic volcanics; tuff rings, cinders, and lavas
- Qbo - Basalt or basaltic andesite; Middle and Lower Pleistocene
- Qvr - Valles Rhyolite; Jemez Mountains area only
- Qbt - Bandelier Tuff; Jemez Mountains area only
- Qoa - Older alluvial deposits of upland plains and piedmont areas, and calcic soils and eolian cover sediments of High Plains region; includes scattered lacustrine, playa, and alluvial deposits of the Tahoka, Double Tanks, Tule, Blanco, Blackwater Draw, and Gatuna Formations, the latter of which may have a Pliocene aspect at base; outcrops, however, are basically of Quaternary deposits; Upper Quaternary to uppermost Pliocene(?)
- QTa - Shallow basin fill, west-central area; includes Quemado Formation; Lower Quaternary to Upper Pliocene
- QTp - Older piedmont alluvial deposits
- QTb - Basaltic and andesitic volcanics interbedded with Pleistocene and Pliocene sedimentary units
- QTr - Silicic flows and domes interbedded with Pleistocene and Pliocene sedimentary units
- QTt - Travertine
- QTp - Older piedmont and alluvial fan deposits; may in part have a Late Tertiary aspect
- QTg - Gila Group. Includes Mimbres Formation and several unnamed units in southwestern basins; Middle Pleistocene to uppermost Oligocene
- QTsf- Santa Fe Group, undivided. Basin fill of Rio Grande rift region; Middle Pleistocene to uppermost Oligocene
- QTs - Upper Santa Fe Group. Includes Camp Rice, Fort Hancock, Palomas, Sierra Ladrone, Ancha, Puye, and Alamosa Formations; Middle Pleistocene to uppermost Miocene
- Tsu - Tertiary portion of Upper Santa Fe Group
- Tus - Upper Tertiary sedimentary units; includes Bidahochi Formation, the Picuris Formation, and Las Feveas

Formation, and locally fanglomerates; Pliocene to Upper Miocene of Mora area

- Tfl - Fence Lake Formation; conglomerate and conglomeratic sandstone, coarse fluvial volcanoclastic sediments, minor eolian facies, and pedogenic carbonates of the southern Colorado Plateau region; Miocene
- Tsf - Lower and Middle Santa Fe Group. Includes Hayner Ranch, Rincon Valley, Popotosa, Cochiti, Tesuque, Chamita, Abiquiu and other Formations; Miocene and uppermost Oligocene
- To - Ogallala Formation, alluvial and eolian deposits, and petrocalcic soils of the southern High Plains; Lower Pliocene to Middle Miocene (locally includes unit Qoa)
- Tlp - Los Pinos Formation of Lower Santa Fe Group (Miocene and Upper Oligocene); includes Carson Conglomerate (Dane and Bachman, 1965) in Tusas Mountains-San Luis Basin area
- Tos - Mostly Oligocene and Upper Eocene sedimentary and volcanoclastic sedimentary rocks with local andesitic to intermediate volcanics; includes Espinazo, Spears, Bell Top, and Palm Park Formations
- Thb - Hinsdale Basalt; northern Taos and eastern Rio Arriba Counties; basalt flows interbedded with Los Pinos Formation
- Tnb - Basalt and andesite flows; Neogene. Includes flows interbedded with Santa Fe and Gila Groups
- Tpb - Basalt and andesite flows; Pliocene
- Tmb - Basalt and andesite flows; Miocene
- Tnr - Silicic to intermediate volcanic rocks; mainly quartz latite and rhyolite Neogene. May locally include flows interbedded with Santa Fe Group
- Tnv - Neogene volcanic rocks; primarily in Jemez Mountains
- Tc - Chuska Sandstone; restricted to Chuska Mountains
- Tv - Middle Tertiary volcanic rocks, undifferentiated
- Tif - Middle Tertiary felsic shallow-intrusive rocks; phonolites and trachytes of northeastern N.M.
- Tuv - Volcanic and some volcanoclastic rocks, undifferentiated; Lower Miocene and Upper Oligocene (younger than 29 Ma)
- Tlv - Lower Oligocene and Eocene volcanic rocks, undifferentiated; dominantly intermediate composition, with interbedded volcanoclastic rocks; (31-44 Ma.)
- Tuau- Lower Miocene and uppermost Oligocene basaltic andesites (22-26 Ma.). Includes Bearwallow Mountain Andesite and basaltic andesite of Mangas Mountain
- Tual- Upper Oligocene andesites and basaltic andesites (26-29 Ma.); includes La Jara Peak Basaltic Andesite, Uvas Basalt, the basaltic andesite of Poverty Creek, and Squirrel Springs Andesite, the Razorback, Bear Springs, Salt Creek, Gila Flat, and Middle Mountain Formations, and the Alum Mountain Group; locally includes more silicic flows
- Turp- Upper Oligocene rhyolitic pyroclastic rocks (ash-flow tuffs); includes Davis Canyon Tuff, South Crosby Peak Formation, La Jencia, Vick's Peak, Lemitar, South Canyon, Bloodgood Canyon, Shelley Peak Tuffs, tuff of Horseshoe Canyon, Park Tuff, Rhyolite Canyon Tuff, Apache Springs Tuff, Diamond Creek, Jordan Canyon, Garcia Ranch Tuffs, the Turkey Springs Tuff, the tuff of Little Mineral Creek, the Amalia Tuff and others. Some contain volcanoclastic and reworked volcanoclastic rocks, and eolian sandstone; (24-29 Ma.)
- Tlrp- Lower Oligocene silicic pyroclastic rocks (ash-flow tuffs); includes Hell's Mesa, Kneeling Nun, lower part of Bell Top Formation, Caballo Blanco, Datil Well, Rock House Canyon, Blue Canyon, Sugarlump and Tadpole Ridge Tuffs, the tuffs of the Organ cauldron, Treasure Mountain Tuff (now known as Chiquito Peak Tuff) Bluff Creek Tuff, Oak Creek Tuff, tuff Steins Mountain, tuff of Black Bill Canyon, Woodhaul Canyon, Gillespie and Box Canyon Tuffs and other volcanic and interbedded fluvial and pumiceous units; (31-36.5 Ma.)

- Kms - Satan Tongue of Mancos Shale
- Kph - Hosta Tongue of Point Lookout Sandstone; transgressive marine sandstone
- Kmm - Mulatto Tongue of Mancos Shale
- Kcc - Crevasse Canyon Formation; coal-bearing units are Dilco and Gibson Members; other members are Bartlett Barren, Dalton Sandstone, and Borrego Pass Sandstone (or Lentil)
- Kg - Gallup Sandstone; generally regressive marine sandstone; Turonian
- Kmg - Gallup Sandstone and underlying D-Cross Tongue of the Mancos Shale; Turonian
- Kmr - Rio Salado Tongue of the Mancos Shale. Overlies Twowells Tongue of Dakota Sandstone; mapped only where Tres Hermanos Formation or the Atarque Sandstone is present; mapped as Kdr in parts of Socorro County; Turonian
- Kpg - Pescado Tongue of the Mancos Shale and Gallup Sandstone; in Zuni Basin only. Pescado is chronostratigraphic equivalent of Juana Lopez Mbr of Mancos Shale; Turonian
- Kth - Tres Hermanos Formation; (formerly designated as Lower Gallup Sandstone in the Zuni Basin); Turonian
- Kma - Moreno Hill Formation and Atarque Sandstone; in Salt Lake coal field and extreme southern Zuni basin; Turonian
- Km - Mancos Shale; divided into Upper and Lower parts by Gallup Sandstone
- Kmu - Mancos Shale, Upper part (above Gallup Ss)
- Kml - Mancos Shale, Lower part (below Gallup Ss)
- Kdr - Dakota Sandstone and Rio Salado Tongue of the Mancos Shale. In northwest Socorro County locally includes overlying Tres Hermanos Formation
- Kdm - Intertongued Dakota-Mancos sequence of west central New Mexico; includes the Whitewater Arroyo Tongue of Mancos Shale and the Twowells Tongue of the Dakota
- Kd - Dakota Sandstone includes the main body - Oak Canyon, Cubero, and Pagate Tongues plus Clay Mesa Tongue of Mancos Shale; Cenomanian
- Kcg - Greenhorn Formation and Carlile Shale, undivided
- Kc - Carlile Shale; limited to northeastern area; Turonian-Coniacian
- Kgg - Graneros Shale and Greenhorn Formation; limited to northeastern area; lower Turonian and Cenomanian
- Kgh - Greenhorn Formation; limited to northeastern area. The Upper member (Bridge Creek Ls.) can be traced into western area where it is commonly shown as a bed-rank unit in Mancos Shale on detailed maps
- Kgr - Graneros Shale; limited to northeastern area; Cenomanian
- Kdg - Dakota Group of east central and northeast New Mexico; in ascending order, Mesa Rica Sandstone, Pajarito Shale, and Romeroville Sandstone; includes the underlying Tucumcari Shale in Tucumcari area and Glencairn Formation in Union County. Encompasses both Upper and Lower Cretaceous rocks
- Kbm - Mancos Formation and Beartooth Quartzite (and Sarten Sandstone); Mancos includes what was formerly referred to as Colorado Shale which in turn may include equivalents of Tres Hermanos Formation
- Kl - Lower Cretaceous, undivided; in northern Lea and Roosevelt Counties includes equivalents of Tucumcari Shale. In Cornudas Mountains includes Campgrande, Cox and other Washita Group formations. At Cero de Cristo Rey includes several Fredericksburg and Washita Group formations, and the Boquillas Formation (Cenomanian). In the southwest includes Hell-To-Finish, U-Bar, and Mojado Formations which are equivalent to Bisbee Group of Arizona
- J - Jurassic rocks, Middle and Upper, undivided
- Jm - Morrison Formation; Upper Jurassic nonmarine rocks, present only in northern one-third of state
- Jmsu - Morrison Formation and upper San Rafael Group

- Jz - Zuni Sandstone; consists of undivided equivalents of the Summerville Formation and Bluff Sandstone; restricted to Zuni Basin area.
- Jze - Zuni and Entrada Sandstones, undivided
- Je - Entrada Sandstone, Middle Jurassic; Callovian
- Jsr - San Rafael Group; consists of Entrada Sandstone, Todilto and Summerville Formations, Bluff Sandstone, and locally Zuni Sandstone (or only Acoma Tongue of Zuni)
- Tr - Triassic rocks, undivided; continental red beds
- Trcr - Rock Point Formation of Chinle Group; Upper Triassic. May locally include Lukachukai Member of Wingate Sandstone
- Trc - Chinle Group; Upper Triassic; includes Moenkopi Formation (Middle Triassic) at base in many areas; in eastern part of state the following five formations are mapped:
  - Trr- Redonda Formation
  - Trb - Bull Canyon Formation; Norian
  - Trt - Trujillo Formation; Norian
  - Trg - Garita Creek Formation; Carnian
  - Trs - Santa Rosa Formation; Carnian; includes Moenkopi Formation (Middle Triassic) at base in most areas
- Trcu- Upper Chinle Group, Garita Creek through Redonda Formations, undivided
- Trm - Moenkopi Formation; Middle Triassic
- Pz - Paleozoic rocks undivided
- P - Permian rocks undivided
- Pqr - Quartermaster and Rustler Formations; Upper Permian
- Pqm - Quartermaster Formation; red sandstone and siltstone; Upper Permian
- Pr - Rustler Formation; siltstone, gypsum, sandstone, and dolomite; Upper Permian
- Psl - Salado Formation; evaporite sequence; Upper Permian
- Pc - Castile Formation; dominantly anhydrite sequence; Upper Permian
- Pat - Artesia Group; shelf facies forming broad S-SE trending outcrop from Glorieta to Artesia area; includes Grayburg, Queen, Seven Rivers, Yates, and Tansill Formations; Guadalupian. May locally include Moenkopi Formation (Triassic) at top
- Pty - Yates and Tansill Formations. Sandstone, siltstone, limestone, dolomite, and anhydrite; Guadalupian
- Psr - Seven Rivers Formation; gypsum, anhydrite, salt, dolomite, and siltstone; Guadalupian
- Pgq - Grayburg and Queen Formations. Sandstone, gypsum, anhydrite, dolomite, and red mudstone; Guadalupian
- Pcp - Capitan Formation; Upper Guadalupian age limestone (reef facies)
- Pdm - Delaware Mountain Group; includes Brushy Canyon, Cherry Canyon and Bell Canyon Formations; Guadalupian
- Pbc - Bell Canyon Formation; basin facies-sandstone, limestone, and shale; Guadalupian
- Pcc - Cherry Canyon Formation; basin facies-sandstone, limestone, and shale
- Pbrc - Brushy Canyon Formation; basin facies-sandstone, limestone, and shale
- Pgs - Goat Seep Limestone; limestone and dolomite (reef facies); Guadalupian
- Psa - San Andres Formation; limestone and dolomite with minor shale; Guadalupian in south, in part Leonardian to north
- Pg - Glorieta Sandstone; texturally and mineralogically mature, high-silica quartz sandstone
- Psg - San Andres Limestone and Glorieta Sandstone; Guadalupian and Leonardian

- Pco - Cutoff Shale; in Brokeoff Mountains only
- Pvp - Victorio Peak Limestone; in Brokeoff Mountains only
- Py - Yeso Formation; sandstones, siltstones, anhydrite, gypsum, halite, and dolomite; Leonardian
- Pa - Abo Formation; red beds, arkosic at base, finer and more mature above; Wolfcampian; may include limestone beds of Pennsylvanian age (Virgilian) in Zuni Mountains
- Pau - Upper part of Abo Formation; Wolfcampian
- Pal - Lower part of Abo Formation; Wolfcampian, an in part Virgilian?
- Pys - Yeso, Glorieta and San Andres Formations, undivided
- Pay - Yeso and Abo Formations, undivided
- Pct - Cutler Formation; used in northern areas and Chama embayment only
- Ph - Hueco Formation; limestone unit restricted to south central area; Pendejo Tongue divides Abo Fm into upper and lower parts; Wolfcampian
- Pb - Bursum Formation; shale, arkose, and limestone; earliest Permian
- PP - Undivided Permian and Pennsylvanian rocks; includes Horquilla Limestone, Earp Formation, Epitaph and Scherrer Formations, and Concha Limestone
- PPsc- Sangre de Cristo Formation, in Sangre de Cristo Mountains
  
- P** - Pennsylvanian rocks, undivided; in Sangre de Cristo Mountains may include Sandia Formation, Madera Limestone, La Pasada, Alamitos, and Flechado Formations: elsewhere may include Bar-B, Nakaye, Red House, Oswaldo, and Syrena Formations
- Pm** - Madera Formation (Limestone, or Group); in Manzano Mountains includes Los Moyos Limestone and Wild Cow Formation; in Lucero Mesa includes Gray Mesa, Atrasdo, and Red Tanks Members; in Sacramento Mountains includes Beeman and Holder Formations; may include strata lumped as Magdalena Group in a few areas
- Pme** - Exotic blocks of Madera Limestone; present only in the Chloride area of Sierra County
- Ps** - Sandia Formation; predominately clastic unit (commonly arkosic) with minor black shales, and limestone in lower part; locally includes Osha Canyon Formation in Nacimiento Mountains
- Pps** - Panther Seep Formation; Organ, Franklin, and San Andres Mountains
- Plc** - Lead Camp Formation; San Andres and Organ Mountains
- M** - Mississippian rocks undivided; Arroyo Penasco Group in Sangre de Cristo Mountains, Sierra Nacimiento, San Pedro Mountain, and Sandia Mountains; Lake Valley Limestone in south-central New Mexico
- Mk** - Kelly Limestone; Socorro and Sierra Counties
- MD** - Mississippian and Devonian rocks undivided; includes the Lake Valley Limestone, Caballero, Las Cruces, Rancheria, and Helms Formations and Escabrosa Group of Mississippian age; the Onate, Sly Gap, Contadero Formations, and Percha Shale of south-central New Mexico, and Canutillo Formation of Northern Franklin Mountains and Bishops Cap area, all of Devonian age
- MC** - Cambrian through Mississippian rocks undivided; includes Bliss Sandstone (Cambrian and Ordovician), El Paso Formation and Montoya Group (or Fm), (Ordovician); locally rocks of Devonian age, and the Lake Valley Limestone (Mississippian)
- D** - Percha Shale; southern Caballo Mountains. Also includes the Onate and Sly Gap Formations
- SO** - Silurian and Ordovician rocks undivided
- SOc** - Silurian through Cambrian rocks undivided
- OC** - Ordovician and Cambrian rocks undivided; includes Bliss Sandstone, El Paso Formation, and Montoya Formation (or Group)
- OCp** - Ordovician-Cambrian plutonic rocks of Florida Mountains

Turf-	Upper Oligocene silicic (or felsic) flows and masses and associated pyroclastic rocks; includes Taylor Creek, Fanney, and Rocky Canyon Rhyolites
Tlrf-	Lower Oligocene silicic (or felsic) flows, domes, and associated pyroclastic rocks and intrusions; includes Mimbres Peak Formation
Ti -	Tertiary intrusive rocks; undifferentiated
Tui -	Miocene to Oligocene silicic to intermediate intrusive rocks; dikes, stocks, plugs, and diatremes
Tuim-	Upper and Middle Tertiary mafic intrusive rocks
Tli -	Quartz monzonites (Eocene) in the Silver City and Los Pinos Range, intermediate intrusives of the Cooke's Range (Oligocene), and other intermediate to felsic dikes and plugs of Oligocene and Eocene age
Tla -	Lower Tertiary, (Lower Oligocene and Eocene) andesite and basaltic andesite flows, and associated volcanoclastic units. Includes Rubio Peak Formation, and andesite of Dry Leggett Canyon
Tps -	Paleogene sedimentary units; includes Baca, Galisteo, El Rito, Blanco Basin, Love Ranch, Lobo, Sanders Canyon, Skunk Ranch, Timberlake, and Cub Mountain Formations
Tsj -	San Jose Formation; Eocene, San Juan Basin
Tn -	Nacimiento Formation; Paleocene, San Juan Basin
Toa -	Ojo Alamo Formation; Paleocene, San Juan Basin
Tpc -	Poison Canyon Formation; Paleocene, in Raton Basin
TKr -	Raton Formation; in Raton Basin; unit contains conformable K/T boundary
TKpr-	Poison Canyon and Raton Formations; undivided
TKa -	Animas Formation; in northeast San Juan Basin
TKav-	Andesitic volcanics
TKi -	Paleogene and Upper Cretaceous intrusive rocks; includes Hanover, Fierro, Tyrone, and Lordsburg granodiorite-quartz monzonite porphyries
K -	Cretaceous rocks, undivided;
Ki -	Uppermost Cretaceous intrusive rocks; restricted to Copper Flats area in Sierra County
Ka -	Uppermost Cretaceous andesite flows; restricted to southwestern area.
Ku -	Upper Cretaceous, undivided. Includes Virden Formation in northern Hidalgo County, Ringbone Formation in Hidalgo and Luna and Grant Counties, and locally Beartooth and Sarten, Mancos in Silver City area; Cenomanian - Maastrichtian for most part, although Beartooth is pre-Cenomanian
Kmc -	McRae Formation; Engle basin - Cutter sag area; Maastrichtian
Kvt -	Vermejo Formation and Trinidad Sandstone; Maastrichtian
Kkf -	Kirtland and Fruitland Formations; coal-bearing, coal primarily in the Fruitland; Campanian to Maastrichtian
Kpc -	Pictured Cliffs Sandstone; prominent cliff-forming marine sandstone
Kls -	Lewis Shale; marine shale and mudstone
Kpn -	Pierre Shale and Niobrara Formation
Knf -	Fort Hays Limestone Member of Niobrara Formation
Kmv -	Mesaverde Group includes the Gallup Sandstone, Crevasse Canyon Formation, Point Lookout Sandstone, Menefee Formation, and Cliff House Sandstone
Kch -	Cliff House Sandstone; transgressive marine sandstone; Campanian
Klv -	La Ventana Tongue of the Cliff House Sandstone
Kmf -	Menefee Formation; mudstone, shale, and sandstone; coal-bearing
Kpl -	Point Lookout Sandstone; regressive marine sandstone in McKinley and Sandoval Counties. The lower, Hosta Tongue, of Point Lookout is transgressive and is separated from main body by the Satan Tongue of Mancos Shale; Santonian - Campanian



- Y - Middle Proterozoic rocks, undifferentiated
- Yi - Middle Proterozoic; mafic dikes, diabase, metadiabase, metadiorite mainly of Burro Mountains; age not well constrained
- Ys - Middle Proterozoic sedimentary rocks of the Sacramento Mountains
- Yp - Middle Proterozoic plutonic rocks (younger than 1600 Ma.)
- YXp - Middle and Lower Proterozoic plutonic rocks, undivided
- X - Lower Proterozoic rocks, undivided
- Xms - Lower Proterozoic metasedimentary rocks, circa 1650-1700 Ma. Essentially equivalent to Hondo Group; locally includes high-grade quartzite-pelitic schist of unknown age
- Xm - Lower Proterozoic metamorphic rocks, dominantly felsic volcanic, volcanoclastic and plutonic rocks, circa 1650-1700+ Ma; includes Vadito Group. Also locally includes high-grade felsic gneisses of unknown age
- Xp - Lower Proterozoic plutonic rocks generally older than 1600 Ma.
- Xmo - Lower Proterozoic metamorphic rocks, dominantly mafic, age 1720-1760 Ma.
- Xmu - Lower Proterozoic metamorphic rocks, undivided



## Instructions for installing the Geologic Map of New Mexico

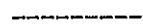
- 1) make a directory on your C drive called NM  
    cd \  
    mkdir nm
- 2) change to the nm directory  
    cd nm
- 3) restore the data from the disks  
    msbackup  
    choose restore
- 4) make a backup copy of your config8.sym  
    cd \sys8 ( or your gsmmap directory)  
    copy config8.sym config8.bak
- 5) copy the config8.sym to the sys8 directory  
    copy c:\nm\config8.sym config8.sym

## instructions for loading plotter pens

pen 1	fine black
pen 2	fine red
pen 3	wide black
pen 4	fine blue



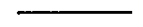
Known contacts



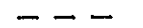
Approximate contacts



Covered contacts



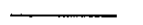
Known fault



Approximate fault



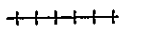
Covered fault



Ti dikes



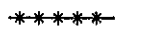
Tui dikes



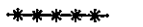
Tli dikes



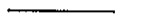
Tuim dikes



TKi dikes



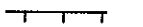
Yi dikes



Xi dikes



Change in level of detail or terminology



Mine dump



Precambrian Shear Zone



Vent

c:\legend\explanat

## Explanation of Map Units

3/25/93

\* 8/5/93

\* 3/10/94

\* 12/16/94

- Qa - Alluvium; Upper and Middle Quaternary
- Ql - Landslide deposits and colluvium
- Qe - Eolian deposits
- Qeg - Gypsiferous eolian deposits
- Qd - Glacial deposits; till and outwash: Upper and Middle Pleistocene
- Qpl - Lacustrine and playa-lake deposits; includes associated alluvial and eolian deposits of major lake basins; Upper Quaternary
- Qp - Piedmont alluvial deposits: Upper and Middle Quaternary; includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans
- Qb - Basalt and andesite flows and vent deposits
- Qr - Silicic volcanics
- Qv - Basaltic volcanics; tuff rings, cinders, and lavas
- Qbo - Basalt or basaltic andesite; Middle and Lower Pleistocene
- Qvr - Valles Rhyolite; Jemez Mountains area only
- Qbt - Bandelier Tuff; Jemez Mountains area only
- Qoa - Older alluvial deposits of upland plains and piedmont areas, and calcic soils and eolian cover sediments of High Plains region; includes scattered lacustrine, playa, and alluvial deposits of the Tahoka, Double Tanks, Tule, Blanco, Blackwater Draw, and Gatuna Formations, the latter of which may have a Pliocene aspect at base; outcrops, however, are basically of Quaternary deposits; Upper Quaternary to uppermost Pliocene(?)
- QTa - Shallow basin fill, west-central area; includes Quemado Formation; Lower Quaternary to Upper Pliocene
- QTp - Older piedmont alluvial deposits
- QTb - Basaltic and andesitic volcanics interbedded with Pleistocene and Pliocene sedimentary units
- QTr - Silicic flows and domes interbedded with Pleistocene and Pliocene sedimentary units
- QTt - Travertine
- QTp - Older piedmont and alluvial fan deposits; may in part have a Late Tertiary aspect
- QTg - Gila Group. Includes Mimbres Formation and several unnamed units in southwestern basins; Middle Pleistocene to uppermost Oligocene
- QTsf - Santa Fe Group, undivided. Basin fill of Rio Grande rift region; Middle Pleistocene to uppermost Oligocene
- QTs - Upper Santa Fe Group. Includes Camp Rice, Fort Hancock, Palomas, Sierra Ladrones, Ancha, Puye, and Alamosa Formations; Middle Pleistocene to uppermost Miocene
- Tsu - Tertiary portion of Upper Santa Fe Group
- Tus - Upper Tertiary sedimentary units; includes Bidahochi Formation, the Picuris Formation, and Las Feveas

Formation, and locally fanglomerates; Pliocene to Upper Miocene of Mora area

- Tfl - Fence Lake Formation; conglomerate and conglomeratic sandstone, coarse fluvial volcanoclastic sediments, minor eolian facies, and pedogenic carbonates of the southern Colorado Plateau region; Miocene
- Tsf - Lower and Middle Santa Fe Group. Includes Hayner Ranch, Rincon Valley, Popotosa, Cochiti, Tesuque, Chamita, Abiquiu and other Formations; Miocene and uppermost Oligocene
- To - Ogallala Formation, alluvial and eolian deposits, and petrocalcic soils of the southern High Plains; Lower Pliocene to Middle Miocene (locally includes unit Qoa)
- Tlp - Los Pinos Formation of Lower Santa Fe Group (Miocene and Upper Oligocene); includes Carson Conglomerate (Dane and Bachman, 1965) in Tusas Mountains-San Luis Basin area
- Tos - Mostly Oligocene and Upper Eocene sedimentary and volcanoclastic sedimentary rocks with local andesitic to intermediate volcanics; includes Espinazo, Spears, Bell Top, and Palm Park Formations
- Thb - Hinsdale Basalt; northern Taos and eastern Rio Arriba Counties; basalt flows interbedded with Los Pinos Formation
- Tnb - Basalt and andesite flows; Neogene. Includes flows interbedded with Santa Fe and Gila Groups
- Tpb - Basalt and andesite flows; Pliocene
- Tmb - Basalt and andesite flows; Miocene
- Tnr - Silicic to intermediate volcanic rocks; mainly quartz latite and rhyolite Neogene. May locally include flows interbedded with Santa Fe Group
- Tnv - Neogene volcanic rocks; primarily in Jemez Mountains
- Tc - Chuska Sandstone; restricted to Chuska Mountains
- Tv - Middle Tertiary volcanic rocks, undifferentiated
- Tif - Middle Tertiary felsic shallow-intrusive rocks; phonolites and trachytes of northeastern N.M.
- Tuv - Volcanic and some volcanoclastic rocks, undifferentiated; Lower Miocene and Upper Oligocene (younger than 29 Ma)
- Tlv - Lower Oligocene and Eocene volcanic rocks, undifferentiated; dominantly intermediate composition, with interbedded volcanoclastic rocks; (31-44 Ma.)
- Tuau- Lower Miocene and uppermost Oligocene basaltic andesites (22-26 Ma.). Includes Bearwallow Mountain Andesite and basaltic andesite of Mangas Mountain
- Tual- Upper Oligocene andesites and basaltic andesites (26-29 Ma.); includes La Jara Peak Basaltic Andesite, Uvas Basalt, the basaltic andesite of Poverty Creek, and Squirrel Springs Andesite, the Razorback, Bear Springs, Salt Creek, Gila Flat, and Middle Mountain Formations; and the Alum Mountain Group; locally includes more silicic flows
- Turp- Upper Oligocene rhyolitic pyroclastic rocks (ash-flow tuffs); includes Davis Canyon Tuff, South Crosby Peak Formation, La Jencia, Vick's Peak, Lemitar, South Canyon, Bloodgood Canyon, Shelley Peak Tuffs, tuff of Horseshoe Canyon, Park Tuff, Rhyolite Canyon Tuff, Apache Springs Tuff, Diamond Creek, Jordan Canyon, Garcia Ranch Tuffs, the Turkey Springs Tuff, the tuff of Little Mineral Creek, the Amalia Tuff and others. Some contain volcanoclastic and reworked volcanoclastic rocks, and eolian sandstone; (24-29 Ma.)
- Tlrp- Lower Oligocene silicic pyroclastic rocks (ash-flow tuffs); includes Hell's Mesa, Kneeling Nun, lower part of Bell Top Formation, Caballo Blanco, Datil Well, Rock House Canyon, Blue Canyon, Sugarlump and Tadpole Ridge Tuffs, the tuffs of the Organ cauldron, Treasure Mountain Tuff (now known as Chiquito Peak Tuff) Bluff Creek Tuff, Oak Creek Tuff, tuff Steins Mountain, tuff of Black Bill Canyon, Woodhaul Canyon, Gillespie and Box Canyon Tuffs and other volcanic and interbedded fluvial and pumiceous units; (31-36.5 Ma.)

- Kms - Satan Tongue of Mancos Shale
- Kph - Hosta Tongue of Point Lookout Sandstone; transgressive marine sandstone
- Kmm - Mulatto Tongue of Mancos Shale
- Kcc - Crevasse Canyon Formation; coal-bearing units are Dilco and Gibson Members; other members are Bartlett Barren, Dalton Sandstone, and Borrego Pass Sandstone (or Lentil)
- Kg - Gallup Sandstone; generally regressive marine sandstone; Turonian
- Kmg - Gallup Sandstone and underlying D-Cross Tongue of the Mancos Shale; Turonian
- Kmr - Rio Salado Tongue of the Mancos Shale. Overlies Twowells Tongue of Dakota Sandstone; mapped only where Tres Hermanos Formation or the Atarque Sandstone is present; mapped as Kdr in parts of Socorro County; Turonian
- Kpg - Pescado Tongue of the Mancos Shale and Gallup Sandstone; in Zuni Basin only. Pescado is chronostratigraphic equivalent of Juana Lopez Mbr of Mancos Shale; Turonian
- Kth - Tres Hermanos Formation; (formerly designated as Lower Gallup Sandstone in the Zuni Basin); Turonian
- Kma - Moreno Hill Formation and Atarque Sandstone; in Salt Lake coal field and extreme southern Zuni basin; Turonian
- Km - Mancos Shale; divided into Upper and Lower parts by Gallup Sandstone
- Kmu - Mancos Shale, Upper part (above Gallup Ss)
- Kml - Mancos Shale, Lower part (below Gallup Ss)
- Kdr - Dakota Sandstone and Rio Salado Tongue of the Mancos Shale. In northwest Socorro County locally includes overlying Tres Hermanos Formation
- Kdm - Intertongued Dakota-Mancos sequence of west central New Mexico; includes the Whitewater Arroyo Tongue of Mancos Shale and the Twowells Tongue of the Dakota
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- Kcg - Greenhorn Formation and Carlile Shale, undivided
- Kc - Carlile Shale; limited to northeastern area; Turonian-Coniacian
- Kgg - Graneros Shale and Greenhorn Formation; limited to northeastern area; lower Turonian and Cenomanian
- Kgh - Greenhorn Formation; limited to northeastern area. The Upper member (Bridge Creek Ls.) can be traced into western area where it is commonly shown as a bed-rank unit in Mancos Shale on detailed maps
- Kgr - Graneros Shale; limited to northeastern area; Cenomanian
- Kdg - Dakota Group of east central and northeast New Mexico; in ascending order, Mesa Rica Sandstone, Pajarito Shale, and Romeroville Sandstone; includes the underlying Tucumcari Shale in Tucumcari area and Glencairn Formation in Union County. Encompasses both Upper and Lower Cretaceous rocks
- Kbm - Mancos Formation and Beartooth Quartzite (and Sarten Sandstone); Mancos includes what was formerly referred to as Colorado Shale which in turn may include equivalents of Tres Hermanos Formation
- Kl - Lower Cretaceous, undivided; in northern Lea and Roosevelt Counties includes equivalents of Tucumcari Shale. In Cornudas Mountains includes Campogrande, Cox and other Washita Group formations. At Cero de Cristo Rey includes several Fredericksburg and Washita Group formations, and the Boquillas Formation (Cenomanian). In the southwest includes Hell-To-Finish, U-Bar, and Mojado Formations which are equivalent to Bisbee Group of Arizona
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- Tr - Triassic rocks, undivided; continental red beds
- Trcr - Rock Point Formation of Chinle Group; Upper Triassic. May locally include Lukachukai Member of Wingate Sandstone
- Trc - Chinle Group; Upper Triassic; includes Moenkopi Formation (Middle Triassic) at base in many areas; in eastern part of state the following five formations are mapped:
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  - Trb - Bull Canyon Formation; Norian
  - Trt - Trujillo Formation; Norian
  - Trg - Garita Creek Formation; Carnian
  - Trs - Santa Rosa Formation; Carnian; includes Moenkopi Formation (Middle Triassic) at base in most areas
- Trcu - Upper Chinle Group, Garita Creek through Redonda Formations, undivided
- Trm - Moenkopi Formation; Middle Triassic
- Pz - Paleozoic rocks undivided
- P - Permian rocks undivided
- Pqr - Quartermaster and Rustler Formations; Upper Permian
- Pqm - Quartermaster Formation; red sandstone and siltstone; Upper Permian
- Pr - Rustler Formation; siltstone, gypsum, sandstone, and dolomite; Upper Permian
- Psi - Salado Formation; evaporite sequence; Upper Permian
- Pc - Castile Formation; dominantly anhydrite sequence; Upper Permian
- Pat - Artesia Group; shelf facies forming broad S-SE trending outcrop from Glorieta to Artesia area; includes Grayburg, Queen, Seven Rivers, Yates, and Tansill Formations; Guadalupian. May locally include Moenkopi Formation (Triassic) at top
- Pty - Yates and Tansill Formations. Sandstone, siltstone, limestone, dolomite, and anhydrite; Guadalupian
- Psr - Seven Rivers Formation; gypsum, anhydrite, salt, dolomite, and siltstone; Guadalupian
- Pgq - Grayburg and Queen Formations. Sandstone, gypsum, anhydrite, dolomite, and red mudstone; Guadalupian
- Pcp - Capitan Formation; Upper Guadalupian age limestone (reef facies)
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- Pcc - Cherry Canyon Formation; basin facies-sandstone, limestone, and shale
- Pbrc - Brushy Canyon Formation; basin facies-sandstone, limestone, and shale
- Pgs - Goat Seep Limestone; limestone and dolomite (reef facies); Guadalupian
- Psa - San Andres Formation; limestone and dolomite with minor shale; Guadalupian in south, in part Leonardian to north
- Pg - Glorieta Sandstone; texturally and mineralogically mature, high-silica quartz sandstone
- Psg - San Andres Limestone and Glorieta Sandstone; Guadalupian and Leonardian



- Pco - Cutoff Shale; in Brokeoff Mountains only
- Pvp - Victorio Peak Limestone; in Brokeoff Mountains only
- Py - Yeso Formation; sandstones, siltstones, anhydrite, gypsum, halite, and dolomite; Leonardian
- Pa - Abo Formation; red beds, arkosic at base, finer and more mature above; Wolfcampian; may include limestone beds of Pennsylvanian age (Virgilian) in Zuni Mountains
- Pau - Upper part of Abo Formation; Wolfcampian
- Pal - Lower part of Abo Formation; Wolfcampian, an in part Virgilian?
- Pys - Yeso, Glorieta and San Andres Formations, undivided
- Pay - Yeso and Abo Formations, undivided
- Pct - Cutler Formation; used in northern areas and Chama embayment only
- Ph - Hueco Formation; limestone unit restricted to south central area; Pendejo Tongue divides Abo Fm into upper and lower parts; Wolfcampian
- Pb - Bursum Formation; shale, arkose, and limestone; earliest Permian
- PP - Undivided Permian and Pennsylvanian rocks; includes Horquilla Limestone, Earp Formation, Epitaph and Scherrer Formations, and Concha Limestone
- PPsc- Sangre de Cristo Formation, in Sangre de Cristo Mountains
  
- P** - Pennsylvanian rocks, undivided; in Sangre de Cristo Mountains may include Sandia Formation, Madera Limestone, La Pasada, Alamitos, and Flechado Formations: elsewhere may include Bar-B, Nakaye, Red House, Oswaldo, and Syrena Formations
- Pm** - Madera Formation (Limestone, or Group); in Manzano Mountains includes Los Moyos Limestone and Wild Cow Formation; in Lucero Mesa includes Gray Mesa, Atrasdo, and Red Tanks Members; in Sacramento Mountains includes Beeman and Holder Formations; may include strata lumped as Magdalena Group in a few areas
- Pme** - Exotic blocks of Madera Limestone; present only in the Chloride area of Sierra County
- Ps** - Sandia Formation; predominately clastic unit (commonly arkosic) with minor black shales, and limestone in lower part; locally includes Osha Canyon Formation in Nacimiento Mountains
- Pps** - Panther Seep Formation; Organ, Franklin, and San Andres Mountains
- Plc** - Lead Camp Formation; San Andres and Organ Mountains
- M** - Mississippian rocks undivided; Arroyo Penasco Group in Sangre de Cristo Mountains, Sierra Nacimiento, San Pedro Mountain, and Sandia Mountains; Lake Valley Limestone in south-central New Mexico
- Mk** - Kelly Limestone; Socorro and Sierra Counties
- MD** - Mississippian and Devonian rocks undivided; includes the Lake Valley Limestone, Caballero, Las Cruces, Rancheria, and Helms Formations and Escabrosa Group of Mississippian age; the Onate, Sly Gap, Contadero Formations, and Percha Shale of south-central New Mexico, and Canutillo Formation of Northern Franklin Mountains and Bishops Cap area, all of Devonian age
- MC** - Cambrian through Mississippian rocks undivided; includes Bliss Sandstone (Cambrian and Ordovician), El Paso Formation and Montoya Group (or Fm), (Ordovician); locally rocks of Devonian age, and the Lake Valley Limestone (Mississippian)
- D** - Percha Shale; southern Caballo Mountains. Also includes the Onate and Sly Gap Formations
- SO** - Silurian and Ordovician rocks undivided
- SOc** - Silurian through Cambrian rocks undivided
- OC** - Ordovician and Cambrian rocks undivided; includes Bliss Sandstone, El Paso Formation, and Montoya Formation (or Group)
- OCp** - Ordovician-Cambrian plutonic rocks of Florida Mountains

Turf-	Upper Oligocene silicic (or felsic) flows and masses and associated pyroclastic rocks; includes Taylor Creek, Fanney, and Rocky Canyon Rhyolites
Tlrf-	Lower Oligocene silicic (or felsic) flows, domes, and associated pyroclastic rocks and intrusions; includes Mimbres Peak Formation
Ti -	Tertiary intrusive rocks; undifferentiated
Tui -	Miocene to Oligocene silicic to intermediate intrusive rocks; dikes, stocks, plugs, and diatremes
Tuim-	Upper and Middle Tertiary mafic intrusive rocks
Tli -	Quartz monzonites (Eocene) in the Silver City and Los Pinos Range, intermediate intrusives of the Cooke's Range (Oligocene), and other intermediate to felsic dikes and plugs of Oligocene and Eocene age
Tla -	Lower Tertiary, (Lower Oligocene and Eocene) andesite and basaltic andesite flows, and associated volcanoclastic units. Includes Rubio Peak Formation, and andesite of Dry Leggett Canyon
Tps -	Paleogene sedimentary units; includes Baca, Galisteo, El Rito, Blanco Basin, Love Ranch, Lobo, Sanders Canyon, Skunk Ranch, Timberlake, and Cub Mountain Formations
Tsj -	San Jose Formation; Eocene, San Juan Basin
Tn -	Nacimiento Formation; Paleocene, San Juan Basin
Toa -	Ojo Alamo Formation; Paleocene, San Juan Basin
Tpc -	Poison Canyon Formation; Paleocene, in Raton Basin
TKr -	Raton Formation; in Raton Basin; unit contains conformable K/T boundary
TKpr-	Poison Canyon and Raton Formations; undivided
TKa -	Animas Formation; in northeast San Juan Basin
TKav-	Andesitic volcanics
TKi -	Paleogene and Upper Cretaceous intrusive rocks; includes Hanover, Fierro, Tyrone, and Lordsburg granodiorite-quartz monzonite porphyries
K -	Cretaceous rocks, undivided;
Ki -	Uppermost Cretaceous intrusive rocks; restricted to Copper Flats area in Sierra County
Ka -	Uppermost Cretaceous andesite flows; restricted to southwestern area.
Ku -	Upper Cretaceous, undivided. Includes Virden Formation in northern Hidalgo County, Ringbone Formation in Hidalgo and Luna and Grant Counties, and locally Beartooth and Sartan, Mancos in Silver City area; Cenomanian - Maastrichtian for most part, although Beartooth is pre-Cenomanian
Kmc -	McRae Formation; Engle basin - Cutter sag area; Maastrichtian
Kvt -	Vermejo Formation and Trinidad Sandstone; Maastrichtian
Kkf -	Kirtland and Fruitland Formations; coal-bearing, coal primarily in the Fruitland; Campanian to Maastrichtian
Kpc -	Pictured Cliffs Sandstone; prominent cliff-forming marine sandstone
Kls -	Lewis Shale; marine shale and mudstone
Kpn -	Pierre Shale and Niobrara Formation
Knf -	Fort Hays Limestone Member of Niobrara Formation
Kmv -	Mesaverde Group includes the Gallup Sandstone, Crevasse Canyon Formation, Point Lookout Sandstone, Menefee Formation, and Cliff House Sandstone
Kch -	Cliff House Sandstone; transgressive marine sandstone; Campanian
Klv -	La Ventana Tongue of the Cliff House Sandstone
Kmf -	Menefee Formation; mudstone, shale, and sandstone; coal-bearing
Kpl -	Point Lookout Sandstone; regressive marine sandstone in McKinley and Sandoval Counties. The lower, Hosta Tongue, of Point Lookout is transgressive and is separated from main body by the Satan Tongue of Mancos Shale; Santonian - Campanian

- Y - Middle Proterozoic rocks, undifferentiated
- Yi - Middle Proterozoic; mafic dikes, diabase, metadiabase, metadiorite mainly of Burro Mountains; age not well constrained
- Ys - Middle Proterozoic sedimentary rocks of the Sacramento Mountains
- Yp - Middle Proterozoic plutonic rocks (younger than 1600 Ma.)
- YXp - Middle and Lower Proterozoic plutonic rocks, undivided
- X - Lower Proterozoic rocks, undivided
- Xms - Lower Proterozoic metasedimentary rocks, circa 1650-1700 Ma. Essentially equivalent to Hondo Group; locally includes high-grade quartzite-pelitic schist of unknown age
- Xm - Lower Proterozoic metamorphic rocks, dominantly felsic volcanic, volcaniclastic and plutonic rocks, circa 1650-1700+ Ma; includes Vadito Group. Also locally includes high-grade felsic gneisses of unknown age
- Xp - Lower Proterozoic plutonic rocks generally older than 1600 Ma.
- Xmo - Lower Proterozoic metamorphic rocks, dominantly mafic, age 1720-1760 Ma.
- Xmu - Lower Proterozoic metamorphic rocks, undivided

## Instructions for installing the Geologic Map of New Mexico

- 1) make a directory on your C drive called NM  
    cd \  
    mkdir nm
- 2) change to the nm directory  
    cd nm
- 3) restore the data from the disks  
    msbackup  
    choose restore
- 4) make a backup copy of your config8.sym  
    cd \sys8 ( or your gsmmap directory)  
    copy config8.sym config8.bak
- 5) copy the config8.sym to the sys8 directory  
    copy c:\nm\config8.sym config8.sym

## instructions for loading plotter pens

pen 1	fine black
pen 2	fine red
pen 3	wide black
pen 4	fine blue

## Explanation of Map Units

3/25/93

\* 8/5/93

\* 3/10/94

\* 12/16/94

- Qa - Alluvium; Upper and Middle Quaternary
- Ql - Landslide deposits and colluvium
- Qe - Eolian deposits
- Qeg - Gypsiferous eolian deposits
- Qd - Glacial deposits; till and outwash: Upper and Middle Pleistocene
- Qpl - Lacustrine and playa-lake deposits; includes associated alluvial and eolian deposits of major lake basins; Upper Quaternary
- Qp - Piedmont alluvial deposits: Upper and Middle Quaternary; includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans
- Qb - Basalt and andesite flows and vent deposits
- Qr - Silicic volcanics
- Qv - Basaltic volcanics; tuff rings, cinders, and lavas
- Qbo - Basalt or basaltic andesite; Middle and Lower Pleistocene
- Qvr - Valles Rhyolite; Jemez Mountains area only
- Qbt - Bandelier Tuff; Jemez Mountains area only
- Qoa - Older alluvial deposits of upland plains and piedmont areas, and calcic soils and eolian cover sediments of High Plains region; includes scattered lacustrine, playa, and alluvial deposits of the Tahoka, Double Tanks, Tule, Blanco, Blackwater Draw, and Gatuna Formations, the latter of which may have a Pliocene aspect at base; outcrops, however, are basically of Quaternary deposits; Upper Quaternary to uppermost Pliocene(?)
- QTa - Shallow basin fill, west-central area; includes Quemado Formation; Lower Quaternary to Upper Pliocene
- QTP - Older piedmont alluvial deposits
- QTb - Basaltic and andesitic volcanics interbedded with Pleistocene and Pliocene sedimentary units
- QTr - Silicic flows and domes interbedded with Pleistocene and Pliocene sedimentary units
- QTt - Travertine
- QTP - Older piedmont and alluvial fan deposits; may in part have a Late Tertiary aspect
- QTg - Gila Group. Includes Mimbres Formation and several unnamed units in southwestern basins; Middle Pleistocene to uppermost Oligocene
- QTsf - Santa Fe Group, undivided. Basin fill of Rio Grande rift region; Middle Pleistocene to uppermost Oligocene
- QTS - Upper Santa Fe Group. Includes Camp Rice, Fort Hancock, Palomas, Sierra Ladrones, Ancha, Puye, and Alamosa Formations; Middle Pleistocene to uppermost Miocene
- Tsu - Tertiary portion of Upper Santa Fe Group
- Tus - Upper Tertiary sedimentary units; includes Bidahochi Formation, the Picuris Formation, and Las Feveas

Formation, and locally fanglomerates; Pliocene to Upper Miocene of Mora area

- Tfl - Fence Lake Formation; conglomerate and conglomeratic sandstone, coarse fluvial volcanoclastic sediments, minor eolian facies, and pedogenic carbonates of the southern Colorado Plateau region; Miocene
- Tsf - Lower and Middle Santa Fe Group. Includes Hayner Ranch, Rincon Valley, Popotosa, Cochiti, Tesuque, Chamita, Abiquiu and other Formations; Miocene and uppermost Oligocene
- To - Ogallala Formation, alluvial and eolian deposits, and petrocalcic soils of the southern High Plains; Lower Pliocene to Middle Miocene (locally includes unit Qoa)
- Tlp - Los Pinos Formation of Lower Santa Fe Group (Miocene and Upper Oligocene); includes Carson Conglomerate (Dane and Bachman, 1965) in Tusas Mountains-San Luis Basin area
- Tos - Mostly Oligocene and Upper Eocene sedimentary and volcanoclastic sedimentary rocks with local andesitic to intermediate volcanics; includes Espinazo, Spears, Bell Top, and Palm Park Formations
- Thb - Hinsdale Basalt; northern Taos and eastern Rio Arriba Counties; basalt flows interbedded with Los Pinos Formation
- Tnb - Basalt and andesite flows; Neogene. Includes flows interbedded with Santa Fe and Gila Groups
- Tpb - Basalt and andesite flows; Pliocene
- Tmb - Basalt and andesite flows; Miocene
- Tnr - Silicic to intermediate volcanic rocks; mainly quartz latite and rhyolite Neogene. May locally include flows interbedded with Santa Fe Group
- Tnv - Neogene volcanic rocks; primarily in Jemez Mountains
- Tc - Chuska Sandstone; restricted to Chuska Mountains
- Tv - Middle Tertiary volcanic rocks, undifferentiated
- Tif - Middle Tertiary felsic shallow-intrusive rocks; phonolites and trachytes of northeastern N.M.
- Tuv - Volcanic and some volcanoclastic rocks, undifferentiated; Lower Miocene and Upper Oligocene (younger than 29 Ma)
- Tlv - Lower Oligocene and Eocene volcanic rocks, undifferentiated; dominantly intermediate composition, with interbedded volcanoclastic rocks; (31-44 Ma.)
- Tuau- Lower Miocene and uppermost Oligocene basaltic andesites (22-26 Ma.). Includes Bearwallow Mountain Andesite and basaltic andesite of Mangas Mountain
- Tual- Upper Oligocene andesites and basaltic andesites (26-29 Ma.); includes La Jara Peak Basaltic Andesite, Uvas Basalt, the basaltic andesite of Poverty Creek, and Squirrel Springs Andesite, the Razorback, Bear Springs, Salt Creek, Gila Flat, and Middle Mountain Formations, and the Alum Mountain Group; locally includes more silicic flows
- Turp- Upper Oligocene rhyolitic pyroclastic rocks (ash-flow tuffs); includes Davis Canyon Tuff, South Crosby Peak Formation, La Jencia, Vick's Peak, Lemitar, South Canyon, Bloodgood Canyon, Shelley Peak Tuffs, tuff of Horseshoe Canyon, Park Tuff, Rhyolite Canyon Tuff, Apache Springs Tuff, Diamond Creek, Jordan Canyon, Garcia Ranch Tuffs, the Turkey Springs Tuff, the tuff of Little Mineral Creek, the Amalia Tuff and others. Some contain volcanoclastic and reworked volcanoclastic rocks, and eolian sandstone; (24-29 Ma.)
- Tlrp- Lower Oligocene silicic pyroclastic rocks (ash-flow tuffs); includes Hell's Mesa, Kneeling Nun, lower part of Bell Top Formation, Caballo Blanco, Datil Well, Rock House Canyon, Blue Canyon, Sugarlump and Tadpole Ridge Tuffs, the tuffs of the Organ cauldron, Treasure Mountain Tuff (now known as Chiquito Peak Tuff) Bluff Creek Tuff, Oak Creek Tuff, tuff Steins Mountain, tuff of Black Bill Canyon, Woodhaul Canyon, Gillespie and Box Canyon Tuffs and other volcanic and interbedded fluvial and pumiceous units; (31-36.5 Ma.)

- Kms - Satan Tongue of Mancos Shale
- Kph - Hosta Tongue of Point Lookout Sandstone; transgressive marine sandstone
- Kmm - Mulatto Tongue of Mancos Shale
- Kcc - Crevasse Canyon Formation; coal-bearing units are Dilco and Gibson Members; other members are Bartlett Barren, Dalton Sandstone, and Borrego Pass Sandstone (or Lentil)
- Kg - Gallup Sandstone; generally regressive marine sandstone; Turonian
- Kmg - Gallup Sandstone and underlying D-Cross Tongue of the Mancos Shale; Turonian
- Kmr - Rio Salado Tongue of the Mancos Shale. Overlies Twowells Tongue of Dakota Sandstone; mapped only where Tres Hermanos Formation or the Atarque Sandstone is present; mapped as Kdr in parts of Socorro County; Turonian
- Kpg - Pescado Tongue of the Mancos Shale and Gallup Sandstone; in Zuni Basin only. Pescado is chronostratigraphic equivalent of Juana Lopez Mbr of Mancos Shale; Turonian
- Kth - Tres Hermanos Formation; (formerly designated as Lower Gallup Sandstone in the Zuni Basin); Turonian
- Kma - Moreno Hill Formation and Atarque Sandstone; in Salt Lake coal field and extreme southern Zuni basin; Turonian
- Km - Mancos Shale; divided into Upper and Lower parts by Gallup Sandstone
- Kmu - Mancos Shale, Upper part (above Gallup Ss)
- Kml - Mancos Shale, Lower part (below Gallup Ss)
- Kdr - Dakota Sandstone and Rio Salado Tongue of the Mancos Shale. In northwest Socorro County locally includes overlying Tres Hermanos Formation
- Kdm - Intertongued Dakota-Mancos sequence of west central New Mexico; includes the Whitewater Arroyo Tongue of Mancos Shale and the Twowells Tongue of the Dakota
- Kd - Dakota Sandstone includes the main body - Oak Canyon, Cubero, and Paguate Tongues plus Clay Mesa Tongue of Mancos Shale; Cenomanian
- Kcg - Greenhorn Formation and Carlile Shale, undivided
- Kc - Carlile Shale; limited to northeastern area; Turonian-Coniacian
- Kgg - Graneros Shale and Greenhorn Formation; limited to northeastern area; lower Turonian and Cenomanian
- Kgh - Greenhorn Formation; limited to northeastern area. The Upper member (Bridge Creek Ls.) can be traced into western area where it is commonly shown as a bed-rank unit in Mancos Shale on detailed maps
- Kgr - Graneros Shale; limited to northeastern area; Cenomanian
- Kdg - Dakota Group of east central and northeast New Mexico; in ascending order, Mesa Rica Sandstone, Pajarito Shale, and Romeroville Sandstone; includes the underlying Tucumcari Shale in Tucumcari area and Glencairn Formation in Union County. Encompasses both Upper and Lower Cretaceous rocks
- Kbm - Mancos Formation and Beartooth Quartzite (and Sarten Sandstone); Mancos includes what was formerly referred to as Colorado Shale which in turn may include equivalents of Tres Hermanos Formation
- Kl - Lower Cretaceous, undivided; in northern Lea and Roosevelt Counties includes equivalents of Tucumcari Shale. In Cornudas Mountains includes Campogrande, Cox and other Washita Group formations. At Cero de Cristo Rey includes several Fredericksburg and Washita Group formations, and the Boquillas Formation (Cenomanian). In the southwest includes Hell-To-Finish, U-Bar, and Mojado Formations which are equivalent to Bisbee Group of Arizona
- J - Jurassic rocks, Middle and Upper, undivided
- Jm - Morrison Formation; Upper Jurassic nonmarine rocks, present only in northern one-third of state
- Jmsu - Morrison Formation and upper San Rafael Group

- Jz - Zuni Sandstone; consists of undivided equivalents of the Summerville Formation and Bluff Sandstone; restricted to Zuni Basin area.
- Jze - Zuni and Entrada Sandstones, undivided
- Je - Entrada Sandstone, Middle Jurassic; Callovian
- Jsr - San Rafael Group; consists of Entrada Sandstone, Todilto and Summerville Formations, Bluff Sandstone, and locally Zuni Sandstone (or only Acoma Tongue of Zuni)
- Tr - Triassic rocks, undivided; continental red beds
- Trcr - Rock Point Formation of Chinle Group; Upper Triassic. May locally include Lukachukai Member of Wingate Sandstone
- Trc - Chinle Group; Upper Triassic; includes Moenkopi Formation (Middle Triassic) at base in many areas; in eastern part of state the following five formations are mapped:
  - Tr- Redonda Formation
  - Trb - Bull Canyon Formation; Norian
  - Trt - Trujillo Formation; Norian
  - Trg - Garita Creek Formation; Carnian
  - Trs - Santa Rosa Formation; Carnian; includes Moenkopi Formation (Middle Triassic) at base in most areas
- Trcu- Upper Chinle Group, Garita Creek through Redonda Formations, undivided
- Trm - Moenkopi Formation; Middle Triassic
- Pz - Paleozoic rocks undivided
- P - Permian rocks undivided
- Pqr - Quartermaster and Rustler Formations; Upper Permian
- Pqm - Quartermaster Formation; red sandstone and siltstone; Upper Permian
- Pr - Rustler Formation; siltstone, gypsum, sandstone, and dolomite; Upper Permian
- Psl - Salado Formation; evaporite sequence; Upper Permian
- Pc - Castile Formation; dominantly anhydrite sequence; Upper Permian
- Pat - Artesia Group; shelf facies forming broad S-SE trending outcrop from Glorieta to Artesia area; includes Grayburg, Queen, Seven Rivers, Yates, and Tansill Formations; Guadalupian. May locally include Moenkopi Formation (Triassic) at top
- Pty - Yates and Tansill Formations. Sandstone, siltstone, limestone, dolomite, and anhydrite; Guadalupian
- Psr - Seven Rivers Formation; gypsum, anhydrite, salt, dolomite, and siltstone; Guadalupian
- Pgq - Grayburg and Queen Formations. Sandstone, gypsum, anhydrite, dolomite, and red mudstone; Guadalupian
- Pcp - Capitan Formation; Upper Guadalupian age limestone (reef facies)
- Pdm - Delaware Mountain Group; includes Brushy Canyon, Cherry Canyon and Bell Canyon Formations; Guadalupian
- Pbc - Bell Canyon Formation; basin facies-sandstone, limestone, and shale; Guadalupian
- Pcc - Cherry Canyon Formation; basin facies-sandstone, limestone, and shale
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- Yp - Middle Proterozoic plutonic rocks (younger than 1600 Ma.)
- YXp - Middle and Lower Proterozoic plutonic rocks, undivided
- X - Lower Proterozoic rocks, undivided
- Xms - Lower Proterozoic metasedimentary rocks, circa 1650-1700 Ma. Essentially equivalent to Hondo Group; locally includes high-grade quartzite-pelitic schist of unknown age
- Xm - Lower Proterozoic metamorphic rocks, dominantly felsic volcanic, volcanoclastic and plutonic rocks, circa 1650-1700+ Ma; includes Vadito Group. Also locally includes high-grade felsic gneisses of unknown age
- Xp - Lower Proterozoic plutonic rocks generally older than 1600 Ma.
- Xmo - Lower Proterozoic metamorphic rocks, dominantly mafic, age 1720-1760 Ma.
- Xmu - Lower Proterozoic metamorphic rocks, undivided