

# Coal resources of New Mexico

1996

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Scale 1:1,000,000  
1 inch equals approximately 39 mi  
0 10 20 30 40 Miles  
0 10 20 30 40 Kilometers

### DESCRIPTION OF MAP UNITS

Units on map are coal bearing or are adjacent to or surrounded by coal-bearing units. Unit letter symbols at the end of description are those used on the stratigraphic correlation chart, which has greater formal detail than the map.

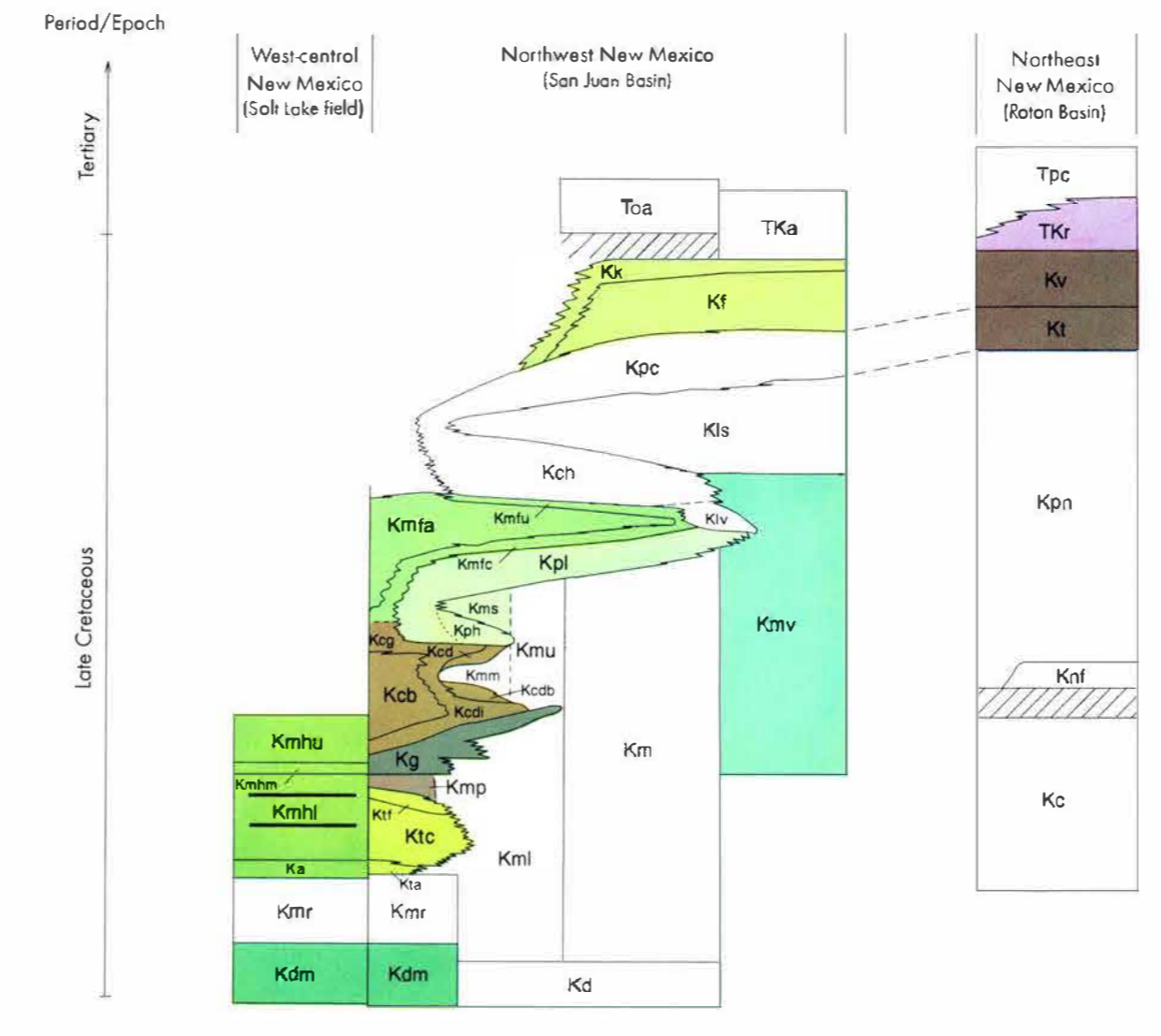
- Qb** Basalts in the Salt Lake field and the North Plains basalt flow (Quaternary)
- Tb1** Bisti/Chaco Formation (lower Pliocene to upper Miocene)—Alluvial, lacustrine, eolian, volcanoclastic, and spring deposits of southern Colorado Plateau
- Tt1** Fence Lake Formation (Pliocene and Miocene)—Conglomerate and conglomeratic sandstone, coarse fluvial volcanoclastic sediments, minor eolian facies, and pedogenic caliche of the southern Colorado Plateau
- Tb** Basalt and andesite flows, undifferentiated (Tertiary)
- Tv** Mt. Taylor volcanics (Tertiary)
- Ti** Intrusive rocks, undifferentiated (Tertiary)
- ▲** Cretaceous rocks, undivided
- Kvt** Vermejo Formation and Trinidad Sandstone (Cretaceous)—Fluvial-deltaic plain and backbarrier interbedded sandstone, siltstone, and shale. Vermejo is COAL BEARING. Trinidad sandstone is a deltafront and interdeltic barrier bar, calcareous to slightly clayey sandstone (Kv, Kt)
- Kst** Kirilind and Fruitland Formations (Cretaceous)—Regressive nonmarine shale, siltstone, and fine grained sandstone. Both formations are COAL BEARING. However, economic coal is in the Fruitland. All on each side of the San Juan Basin includes the Lewis Shale, a marine shale and mudstone, and the Pictured Cliffs Sandstone, a prominent cliff-forming, generally regressive marine sandstone (Kt, Kf)
- Kmv** Mesaverde Group (Cretaceous)—Includes the transgressive marine Cliff House Sandstone, Menefee Formation, Rose Lickour Sandstone, Cheyenne Canyon Formation, and the Gallup Sandstone
- Kmf** Menefee Formation (Cretaceous)—Nonmarine mudstone, shale, and sandstone; the COAL BEARING upper coal member and Cleary Coal Member are separated by the medial Allison Member, which is barren of economic coals (Kmf, Kmf1, Kmf2)
- Kp** Point Lookout Sandstone (Cretaceous)—Prominent cliff-forming, generally regressive marine sandstone in McKinley and Sandoval Counties. The lower Hazo Tongue of the Point Lookout is transgressive and is separated from the main body by the Sotan Tongue of the Mancos Shale. The Point Lookout Hazo Tongue and the Sotan Tongue of the Mancos are included within the Kp area on the map (Kp, Kps, KpH)
- Kcc** Crevasse Canyon Formation (Cretaceous)—Nearshore marine to nonmarine sandstone, shale, mudstone, and coal. COAL BEARING units are Gibson and Dilco Coal Members; other units are the Borlett Barren Member, Dalton Sandstone, and Borego Pass Sandstone or lentil (Kcc, Kcc1, Kcc2, Kcc3)
- Kg** Gallup Sandstone (Cretaceous)—Generally regressive marine sandstone
- Kpg** Pascado Tongue of the Mancos Shale and Gallup Sandstone (Cretaceous)—Marine shale and sandstone. Gallup Sandstone is in the Zuni Basin only. Pascado Tongue is the sigmoidal equivalent of Juana Toppa Member of the Mancos Shale (KpH)
- Kma** Moreno Hill Formation and Atarque Sandstone (Cretaceous)—In the Salt Lake coal field and extensive southern Zuni Basin. Nonmarine sandstone, mudstone, and claystone. The upper and lower members in the Moreno Hill Formation are COAL BEARING and are divided by the predominantly sandstone middle member (Kma, Kmh, KmH, Kt)
- Kth** Tes Hermonas Formation (Cretaceous)—Near shore marine to nonmarine sandstone, shale, mudstone, and siltstone. Formerly designated as lower Gallup Sandstone in the Zuni Basin. Consists of the Fire Ranch Member, COAL BEARING Carthage Member, and the Atarque Member (Kt, Kt1, Kt2)
- Kdm** Interfingered Dakota-Mancos sequence of west-central New Mexico (Cretaceous)—Includes the Whitewater Arroyo Tongue of the Mancos Shale and the Twowells Tongue of the Dakota
- J** Jurassic rocks, undivided
- Pennsylvanian rocks, undivided in the Sangre de Cristo Mountains may include the locally COAL BEARING Sandoz Formation as well as the Modern Limestone and La Posada, Alamos, and Flechado Formations; elsewhere may include Borl, Nakayo, Red House, Oswald, and Syerra Formations

### MAP SYMBOLS

- ▲** Cretaceous coal localities
- Pennsylvanian coal localities
- Wilderness areas
- National parks and monuments
- - -** Fault—Dashed where approximately located; full and bar on downthrow side of high angle fault

### STRATIGRAPHIC CORRELATION CHART

Modified from Anderson and Jones, 1994



### STRATIGRAPHIC UNITS

Modified from Anderson and Jones, 1994  
Colors are those used for equivalent units on the map

- Tpc** Poison Canyon Formation
- Tob** Ojo Alamo Formation
- TKr** Raton Formation
- TKa** Animas Formation
- V** Vermejo Formation
- Tr** Trinidad Formation
- Ks** Kirilind Formation
- Kf** Fruitland Formation
- Kpc** Pictured Cliffs Sandstone
- Kls** Lewis Shale
- Kpn** Pierre Shale and Niobrara Formation
- Knf** Fort Hays Limestone Member of Niobrara Formation
- Kmv** Mesaverde Group
- Kch** Cliff House Sandstone
- Klv** La Ventana Tongue
- Kmfu** Menefee Formation
- Kmta** Allison Member
- Kmfc** Cleary Coal Member
- Kpl** Point Lookout Sandstone
- Kph** Hazo Tongue
- Km** Mancos Shale
- Kmu** Upper part
- Kml** lower part
- Kms** Sotan Tongue
- Kmh** Mulatto Tongue
- Kmp** Pascado Tongue
- Kmr** Rio Salado Tongue
- Kag** Crevasse Canyon Formation
- Kcc** Dalton Sandstone Member
- Kcc1** Borlett Barren Member
- Kcc2** Borego Pass Sandstone
- Kcc3** Dilco Coal Member
- Kg** Gallup Sandstone
- Kc** Corlie Shale
- Kmh1** Moreno Hill Formation
- Kmh2** Fire Ranch Member
- Kmh3** Middle member
- Kmh4** lower member
- Ka** Atarque Sandstone
- Kth** Tes Hermonas Formation
- Kt1** Fire Ranch Member
- Kt2** Carthage Member
- Kt3** Atarque Member
- Kdm** Interfingered Dakota-Mancos sequence of west-central New Mexico
- Kd** Dakota Sandstone