

Geologic Map
of
Fence Lake, New Mexico
1:100,000 metric sheet

compiled by

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Open-file 220

1986

Compilation of Fence Lake 1:100,000 metric sheet

The detailed geologic mapping (1:24,000) upon which this compilation is based is shown on sheet 2. The full reference for each 7-1/2 min quadrangle map in published or open-file report form is listed below. In addition to these 7-1/2 min quadrangle maps, the west half of the Fence Lake sheet has been prepared as two 1:50,000 scale geologic maps by the New Mexico Bureau of Mines and Mineral Resources. These will be available as GM-61 (Atarque Lake 1:50,000), and GM-62 (Fence Lake 1:50,000).

- Anderson, O. J., 1981, Geology and Coal Resources of Cantaralo Spring Quadrangle, Cibola County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file 142.
- Anderson, O. J., 1982, Geology and Coal Resources of Venadito Camp Quadrangle, Cibola County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file 163.
- Anderson, O. J., 1982, Geology and Coal Resources of Atarque Lake Quadrangle, Cibola County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file 167.
- Anderson, O. J., 1982, Geology and Coal Resources of Mesita de Yeso Quadrangle, Cibola County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file 171.
- Anderson, O. J., 1986, Geology and Mineral Resources of York Ranch SE Quadrangle, Cibola and Catron Counties, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-file 220-A.
- Anderson, O. J., and Mapel, W. J., 1983, Geology and Coal Resources of Shoemaker Canyon SE Quadrangle, Cibola County,

New Mexico: New Mexico Bureau of Mines and Mineral Resources
Open-file 172.

Arkell, B., 1984, Geologic Map of Veteado Mountain Quadrangle,
Cibola and Catron Counties, New Mexico: New Mexico Bureau of
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Campbell, F. W., 1981, Geology and coal resources of Cerro Prieto
and the Dyke Quadrangle, Cibola County, New Mexico: New
Mexico Bureau of Mines and Mineral Resources Open-file 144.

Frost, S. J., and Anderson, O. J., 1982, Geology and coal
resources of TwentyTwo Spring Quadrangle, Cibola and Catron
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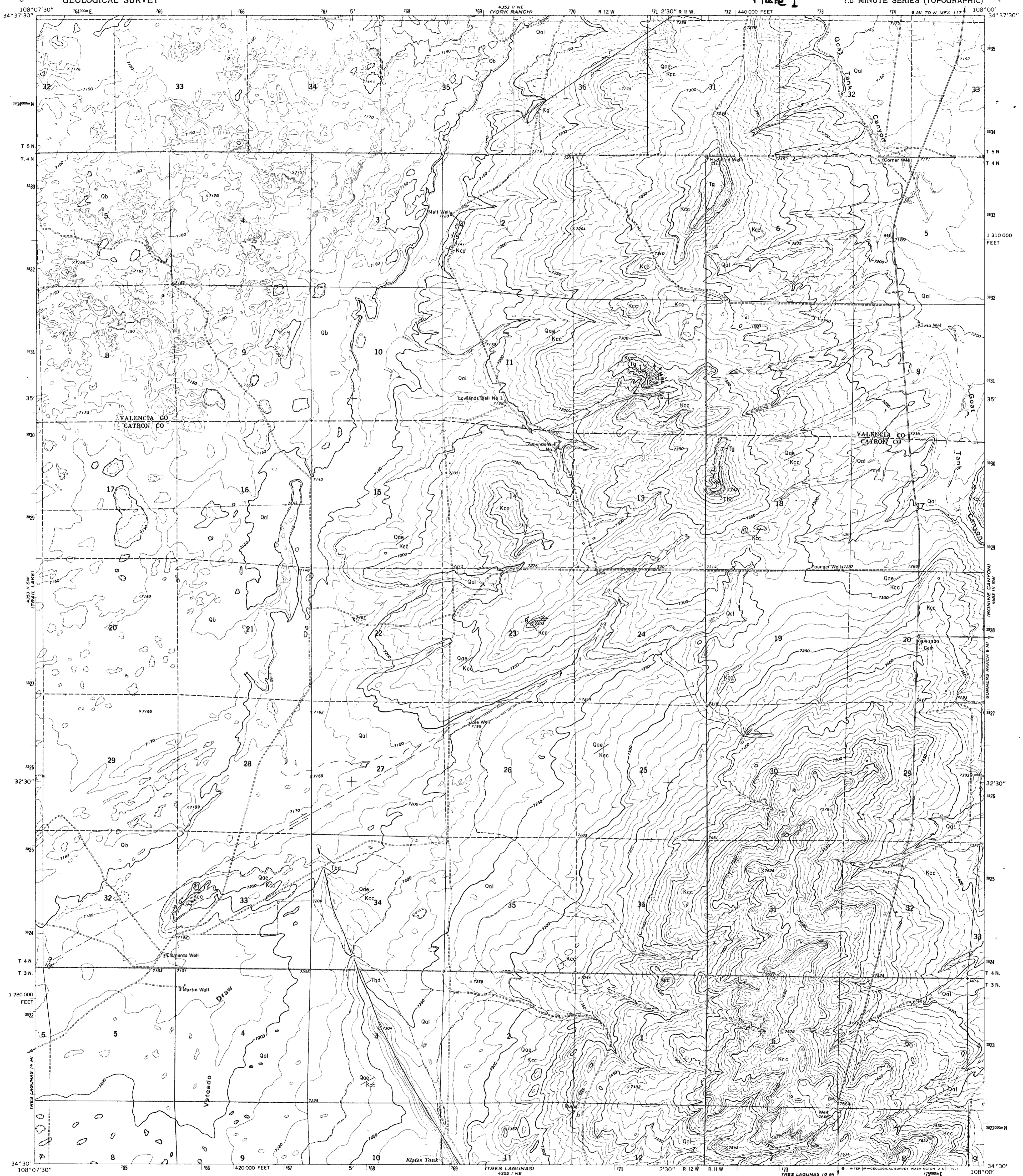
Landis, E. R., and Haschke, L. R., 1983, Geologic map of Fence
Lake SW Quadrangle, Cibola and Catron Counties, New Mexico:
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Mapel, W. J., and Yesberger, W. L., 1985, Geologic map of the
Goat Hill Quadrangle, Cibola County, New Mexico: U.S. Geol.
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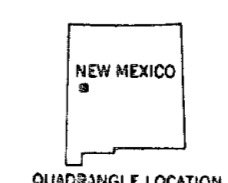
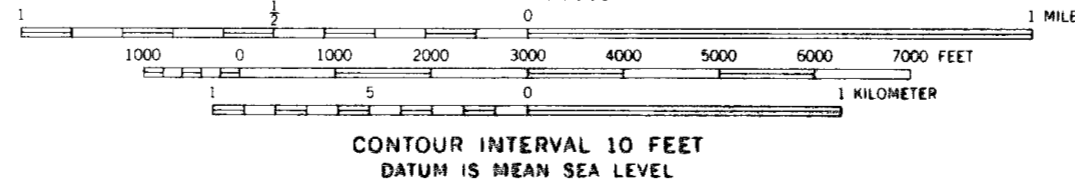
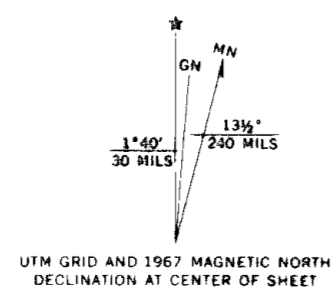
Mapel, W. J., and Yesberger, W. L., 1985, Geologic map of the
Nicoll Lake Quadrangle, Cibola and McKinley Counties, New
Mexico: U.S. Geol. Surv. Map MF-1757.

Mapel, W. J., and Yesberger, W. L., 1985, Geologic map of the Red
Lake Mission Quadrangle, Cibola County, New Mexico: U.S.
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- Maxwell, C. H., 1981, Geologic Map of the El Malpais Instant Study Area and adjacent areas: U.S. Geol. Surv. Map MF-1375-A.
- McLellan, M. W., Haschke, L. R., and Robinson, L. N., 1982, Geologic Map of Rincon Hondo Quadrangle, Cibola County, New Mexico: U.S. Geol. Surv. Map MF-1506.
- McLellan, M. W., Haschke, L. R., and Robinson, L. N., 1983, Geologic Map of the Moreno Hill Quadrangle, Cibola and Catron Counties, New Mexico: U.S. Geol. Surv. Map MF-1509.
- McLellan, M. W., Robinson, L. N., and Haschke, L. R., 1983, Geologic Map of Fence Lake Quadrangle, Cibola County, New Mexico: U.S. Geol. Surv. Map MF-1533.



Map, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography by photogrammetric methods from aerial
photographs taken 1966. Field checked 1967
Polyconic projection. 1927 North American datum
10,000-foot grid based on New Mexico coordinate system,
west zone
1000-meter Universal Transverse Mercator grid ticks,
zone 12, shown in blue
Fine red dashed lines indicate selected fence lines



ROAD CLASSIFICATION
Light-duty ————
Unimproved dirt - - - - -

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D.C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Geology by O.J. Anderson

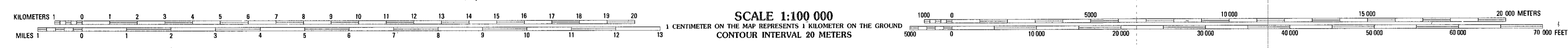
YORK RANCH SE, N. MEX.
N3430-W10800/7.5

1967

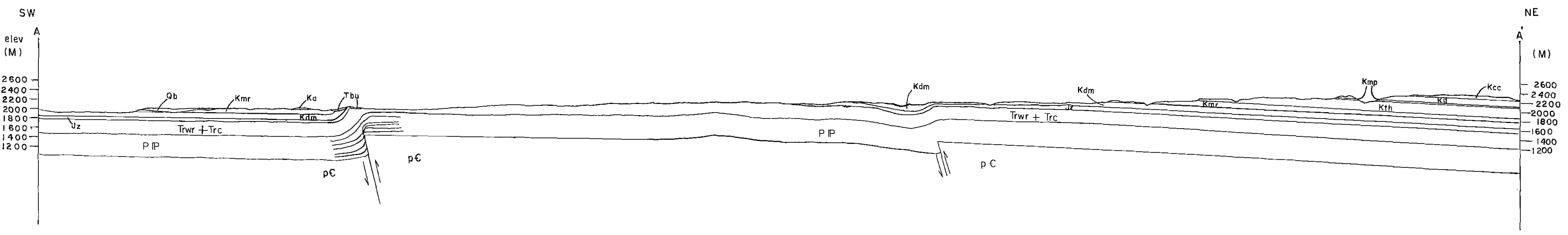
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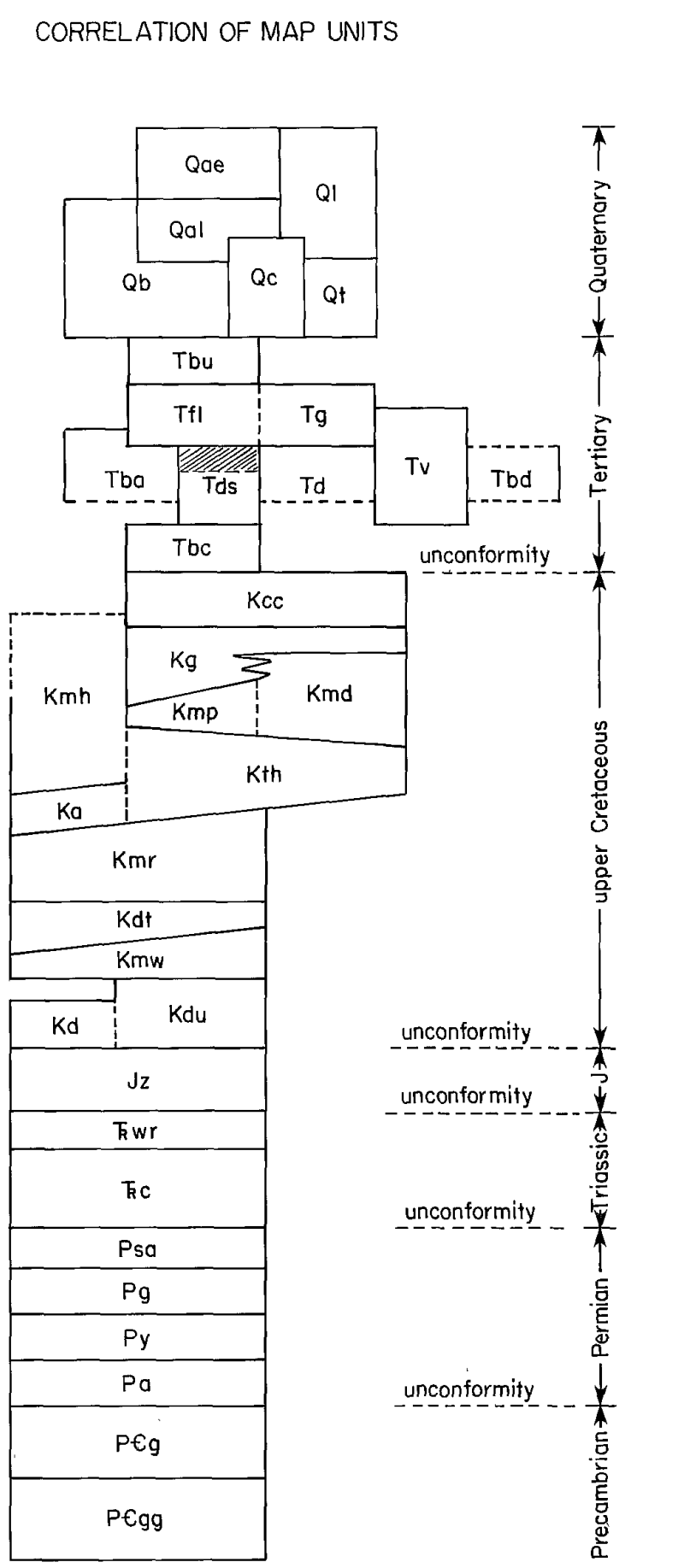
Geology of Fence Lake
 1:100,000 sheet
 NMBMMR Open-file 220 (sheet 1 of 4)
 by O. J. Anderson, 1986
 (drafted by Cherie Pelletier)



Structural cross section A-A'; Kdm= intertongued Dakota Ss — Mancos Sh section ; other symbols as on map. Configuration of basement faults not well constrained

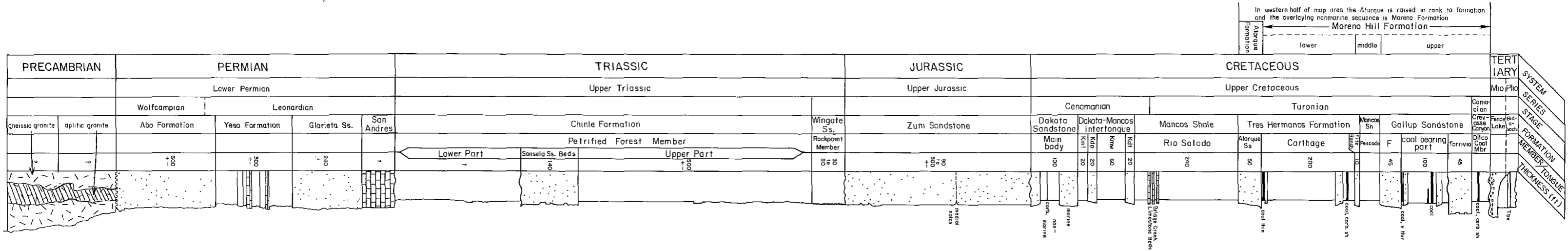
MAP LEGEND			
QUATERNARY		Kth	Tres Hermanos Formation, undifferentiated (of Hook, Molenaar, & Cobban, 1983)
Qae	alluvial and eolian deposits	Kmh	Moreno Hill Formation (of McLellan and others, 1983)
Ql	landslide blocks and colluvium	Ka	Atarque Sandstone (of McLellan and others, 1983)
Qal	alluvium	Kmr	Río Salado Tongue of Mancos Shale
Qt	travertine deposits	Kdt	Twowells Tongue of Dakota Sandstone
Qc	volcanic cinders; cinder cones	Kmw	Whitewater arroyo Tongue of Mancos Shale
Qb	basalt	Kdu	Dakota Sandstone—includes informal lower part of Mancos Shale and Paguate Tongue of Dakota Sandstone
TERTIARY		Kd	Dakota Sandstone, main body
Tbu	Bidahochi Formation, upper part (Pliocene)	JURASSIC	
Tg	conglomerate, gravel, and boulder deposits	Jz	Zuni Sandstone
Tfl	Fence Lake Formation (Miocene?)	TRIASSIC	
Tds	Spears Formation (Oligocene)	Trwr	Rock Point Member of Wingate Sandstone
Tv	volcanic rocks	Trc	Chinle Formation, undifferentiated
Td	diorite/basalt stock (of Arkell, 1984)	PERMIAN	
Tbd	basaltic dike	Psa	San Andres Limestone
Tba	basalt	Pg	Glorieta Sandstone
Tbc	Baca Formation (Eocene)	Py	Yeso Formation
CRETACEOUS		Pa	Abo Formation
Kcc	Crevasse Canyon Formation	PRECAMBRIAN	
Kg	Gallup Sandstone	PCg	aplitic granite
Kmp	Pescado Tongue of Mancos Shale	PCgg	granite gneiss
Kmd	D-Cross Tongue of Mancos Shale		

SYMBOLS	
	Formation, or Member contact; dashed where approximate or inferred
	fault, bar and ball on downthrown block
	inferred fault, bar and ball on downthrown block
	Monoclinical axis showing direction of dip on steep limb
	dip and strike



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(sheet 3 of 4)



Composite Stratigraphic Section (Tertiary and older rocks)

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