

Tertiary intrusive rocks (upper Oligocene)—Undifferentiated map unit includes the monzonite at Nit (28.0 Ma; Weber and Bassett, 1963) and the granite in Anchor Canyon (28.3 Ma; Weber and Bassett, 1963) of the Magdalena composite pluton (Chapin and Seager, 1975).

Permian and Pennsylvanian rocks—Undifferentiated map unit includes, from top to base, San Andres Limestone (Permian), Abo Formation (Permian), and Madena Formation (Pennsylvanian). Rocks crop out in small area east of Granite Mountain. Also present along crest of Magdalena Mountains southwest of map area.

Precambrian rocks—Undifferentiated argillite, quartzite, and volcanic and plutonic rocks.

Contact—Approximately located

Boundary between pedocals and pedalfers—Approximate boundary between soils leached of calcium carbonate (pedalfers) and soils that have accumulated calcium carbonate (pedocals). Pedalfers zone contains small, discontinuous areas of old relict pedocals.

Fault—Dashed where approximately located; dotted where associated scarp is extensively eroded or buried. Bar and ball on downthrown side. Letter denotes location and trend of topographic profile across scarp (data shown in table, this plate). Faults in bedrock not shown.

REFERENCES CITED

Bachman, G. O., and Mehner, H. H., 1978, Geologic significance of some new K-Ar dates, central Rio Grande region, New Mexico. *Geological Society of America Bulletin*, v. 89, no. 2, p. 283-292.

Brown, D. M., 1972, Geology of the southern Bear Mountains, Socorro County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 42, 110 p., map scale 1:24,000.

Chamberlin, R. M., 1982, Geologic map, cross sections, and map units of the Lemat, Socorro, and Chupalea Mountains, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 169, 3 pl., map, scale 1:12,000.

Chapin, C. E., Jahns, R. H., Chamberlin, R. M., and Osburn, G. R., 1978, First day road log from Socorro to Truth or Consequences via Magdalena and Winston (New Mexico), in Chapin, C. E., and Elston, W. E., eds., Field guide to selected cauldrons and mining districts of the Dall-Mogollon volcanic field, New Mexico: New Mexico Geological Society Special Publication 7, p. 1-31.

Chapin, C. E., and Seager, W. R., 1975, Evolution of the Rio Grande rift in the Socorro and Las Cruces areas (New Mexico), in Seager, W. R., Clemens, R. E., and Callender, J. F., eds., Guidebook of the Las Cruces country: New Mexico Geological Society, 25th Field Conference, p. 297-321.

Loughlin, G. F., and Kochmann, A. H., 1942, Geology and ore deposits of the Magdalena district, New Mexico: U.S. Geological Survey Professional Paper 200, 168 p.

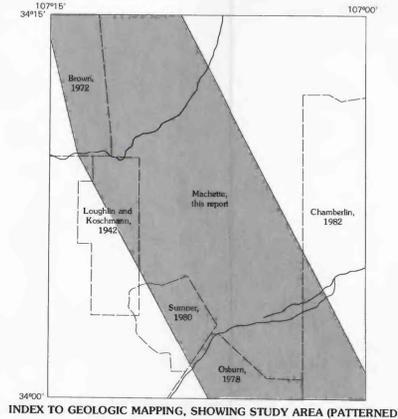
Osburn, G. R., 1978, Geology of the eastern Magdalena Mountains, Water Canyon to Pound Ranch, Socorro County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 113, 160 p., map scale 1:24,000.

Sumner, Ward, 1980, Geology of the Water Canyon-Jordan Canyon areas, Socorro County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 135, 152 p., 1 pl., map scale 1:12,000.

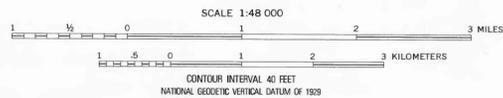
Weber, R. H., and Bassett, W. A., 1963, K-Ar ages of Tertiary volcanic and intrusive rocks in Socorro, Catron, and Grant Counties, New Mexico, in Kuslitz, F. J., ed., Guidebook of the Socorro region, New Mexico: New Mexico Geological Society, 14th Field Conference, p. 220-223.

Scarp morphology data for the La Jencia fault
[S, single scarp; D, double scarp; G, graben; H, half graben; (W), west facing; (E), east facing; (U), upper scarp; (L), lower scarp; n.d., not determined; X, data from hand-leveled profile rather than detailed topographic profile (number following X indicates more than one profile). Aspect is the direction the scarp faces. Dash (-) indicates data not used in analysis of scarp morphology.]

Map symbol	Profile number	Scarp height (m)	Surface offset (m)	θ (degrees)	γ (degrees)	Aspect	Type of scarp	Fault segment
A	M1-30	5.74	5.80	18.5	0.3	N. 72° E.	G(W)-	D
A	M1-30	2.00	2.00	7.0	.0	S. 47° W.	G(E)-	D
B	M1-29	1.15	1.15	3.0	.3	S. 34° W.	G(E)-	D
B	M1-28	4.29	4.52	15.0	.5	N. 34° E.	G(W)-	D
C	M1-27	4.22	3.80	14.8	1.8	N. 32° E.	S----	D
D	M1-34	2.8	5.2	13.5	1.0	N. 75° E.	S----	C
E	M1-33	7.39	4.30	25.0	5.0	N. 28° E.	H----	C
F	M1-32A	3.50	2.30	18.3	6.0	N. 40° E.	D(U)-	C
F	M1-28B	4.02	2.80	19.5	6.0	N. 40° E.	D(L)-	C
G	M1-31	6.69	4.28	23.8	5.5	N. 45° E.	H----	C
H	M1-26x	n.d.	5.5	23.5	n.d.	N. 55° E.	S----	C
I	M1-26	3.71	2.40	19.8	5.3	N. 45° E.	H----	C
J	M1-25A	2.23	1.45	14.5	4.3	N. 53° E.	D(U)-	C
J	M1-25B	1.58	1.10	11.5	4.3	N. 55° E.	D(L)-	C
K	M1-24x5	n.d.	2.0	14.5	n.d.	N. 45° E.	S----	C
L	M1-24x4	n.d.	4.8	20.0	n.d.	N. 85° E.	S----	C
M	M1-24x3	n.d.	3.2	18.0	n.d.	N. 25° E.	S----	C
N	M1-24x2	n.d.	2.8	15.0	n.d.	N. 40° E.	S----	C
O	M1-24x1	n.d.	2.7	14.5	n.d.	N. 50° E.	S----	C
P	M1-24A	2.15	1.60	11.5	4.3	N. 52° E.	D(U)-	C
P	M1-24B	1.91	1.40	14.5	3.8	N. 52° E.	D(L)-	C
Q	M1-23x4	n.d.	4.6	23.0	n.d.	N. 50° E.	S----	C
R	M1-23x3	n.d.	5.6	22.0	n.d.	N. 80° E.	S----	C
S	M1-23x2	n.d.	2.6	17.3	n.d.	N. 75° E.	D(U)-	C
S	M1-23x1	n.d.	1.8	15.8	n.d.	N. 75° E.	D(L)-	C
T	M1-23	6.60	5.10	24.5	4.8	N. 78° E.	H----	C
U	M1-22x	n.d.	5.0	22.5	n.d.	N. 45° E.	S----	C
V	M1-22	5.35	4.05	23.0	4.0	N. 40° E.	S----	C
W	M1-21	2.77	2.50	11.4	3.0	N. 55° E.	S----	B
X	M1-20	6.50	4.00	21.8	5.5	N. 55° E.	H----	B
Y	M1-19	4.80	4.28	17.5	2.3	N. 85° E.	S----	B
Z	M1-18x	n.d.	1.9	13.3	4.0	East-----	S----	B
a	M1-18	4.10	2.67	18.5	3.0	East-----	H----	B
b	M1-17	3.60	2.47	17.0	4.3	N. 70° E.	S----	B
c	M1-16	4.48	3.65	18.0	3.0	N. 60° E.	S----	B
d	M1-15	4.51	3.60	17.5	3.8	N. 60° E.	S----	B
e	M1-14	2.00	1.20	10.5	4.8	N. 87° E.	S----	B
f	M1-13	2.70	1.82	11.8	4.0	N. 70° E.	S----	B
g	M1-12	2.55	2.03	12.0	3.7	N. 82° E.	S----	B
h	M1-11	4.74	3.66	19.0	5.0	N. 75° E.	S----	B
i	M1-10	3.48	2.50	13.8	4.3	N. 70° E.	S----	B
j	M1-9	4.15	2.74	17.5	5.0	N. 70° E.	S----	B
k	M1-8	1.07	.76	12.5	2.3	N. 60° E.	S----	A
l	M1-7	2.31	1.80	15.0	2.8	N. 40° E.	S----	A
m	M1-6	2.17	1.46	11.3	2.8	N. 70° E.	S----	A
n	M1-40	2.15	1.85	14.3	2.5	N. 61° E.	S----	A
o	M1-41	2.24	2.10	14.8	1.8	N. 70° E.	S----	A
p	M1-42	2.20	2.30	12.3	1.0	N. 72° E.	S----	A
q	M1-35	2.74	2.95	15.3	2.4	N. 50° E.	S----	A
r	M1-36	2.28	1.85	13.5	2.3	N. 45° E.	S----	A
s	M1-37	1.52	1.55	9.5	2.5	N. 60° E.	S----	A
t	M1-38	1.03	1.12	9.5	2.8	N. 54° E.	S----	A
u	M1-5	1.48	1.20	11.0	2.8	N. 70° E.	S----	A
v	M1-4	.53	.83	12.0	2.8	N. 45° E.	H----	A
w	M1-3	.75	.58	10.0	2.5	N. 60° E.	S----	A
x	M1-2	1.26	.77	14.0	4.0	N. 65° E.	D(L)H	-
y	M1-1	1.54	1.16	9.3	2.3	N. 75° E.	S----	-
z	M1-1x	n.d.	.8	7.5	3.0	N. 65° E.	S----	-



Base from U.S. Geological Survey
Magdalena, 1:62,500, 1969



MAP SHOWING THE LA JENCIA FAULT AND GEOLOGY OF THE SURROUNDING AREA, CENTRAL NEW MEXICO