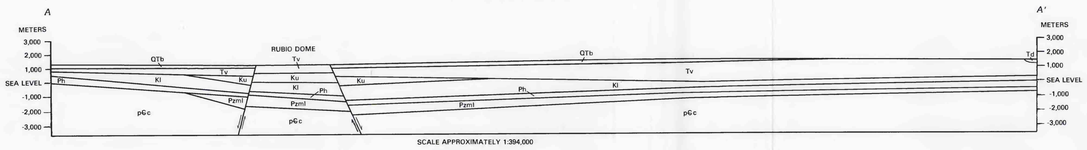
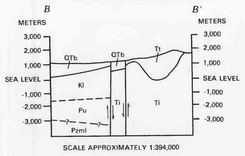
GEOLOGIC SECTION



GEOLOGIC SECTION



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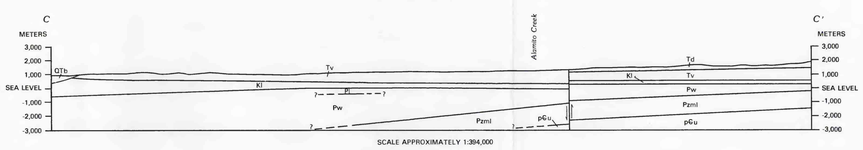
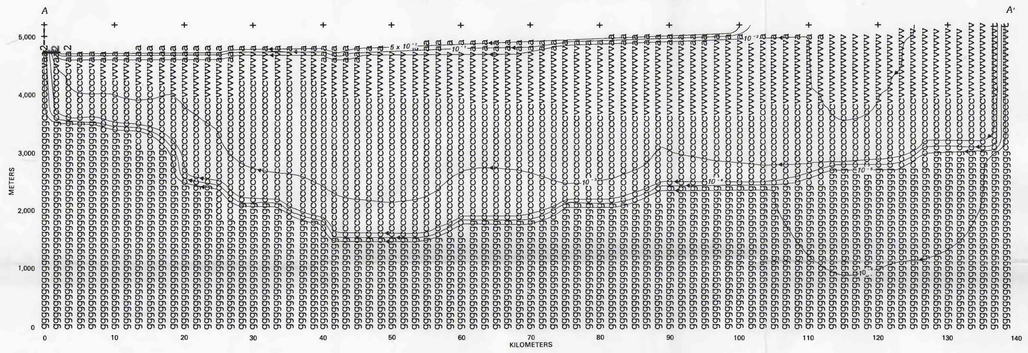
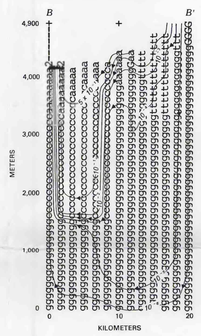


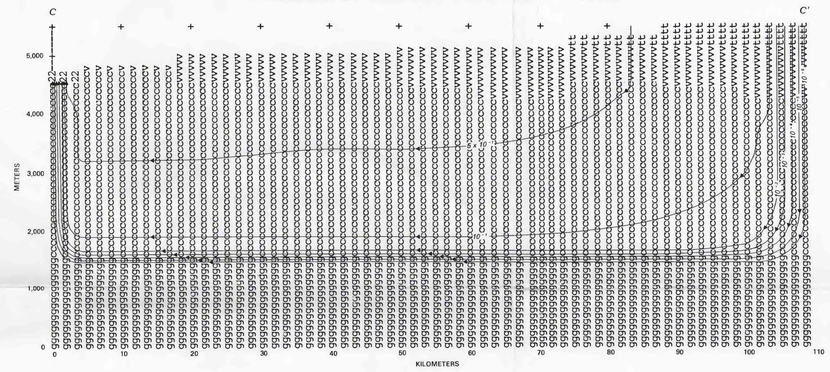
MODELED LITHOLOGY AND FLOW PATHS



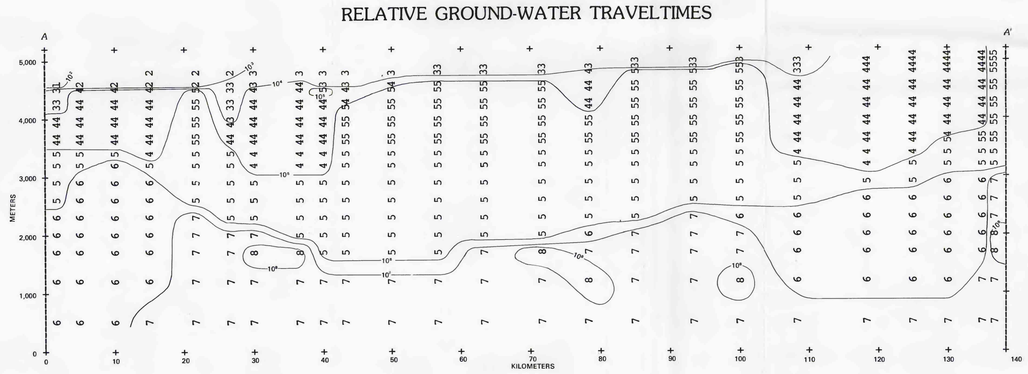
MODELED LITHOLOGY AND FLOW PATHS



MODELED LITHOLOGY AND FLOW PATHS



RELATIVE GROUND-WATER TRAVELTIMES



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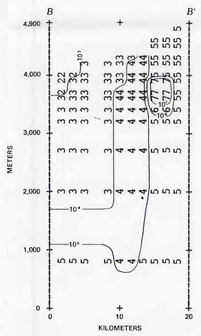

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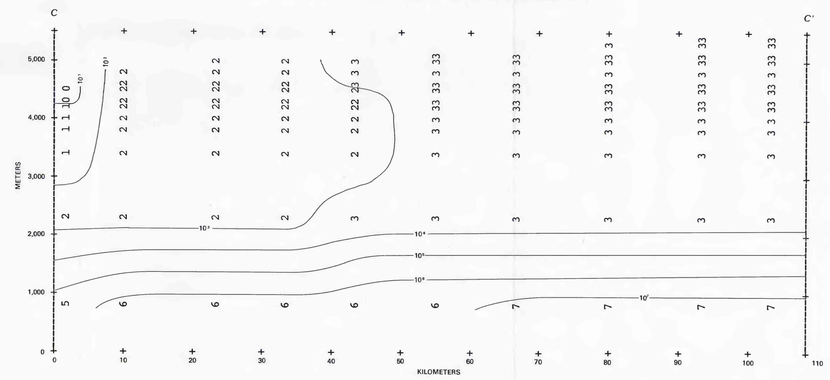
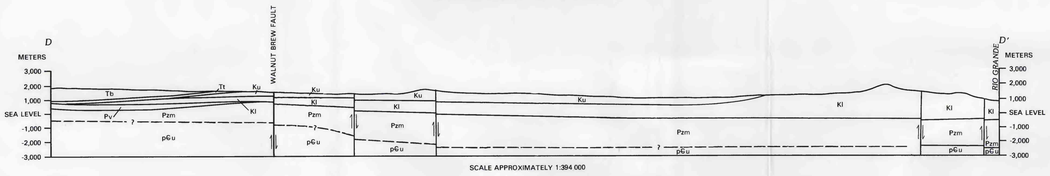


GEOLOGIC SECTION



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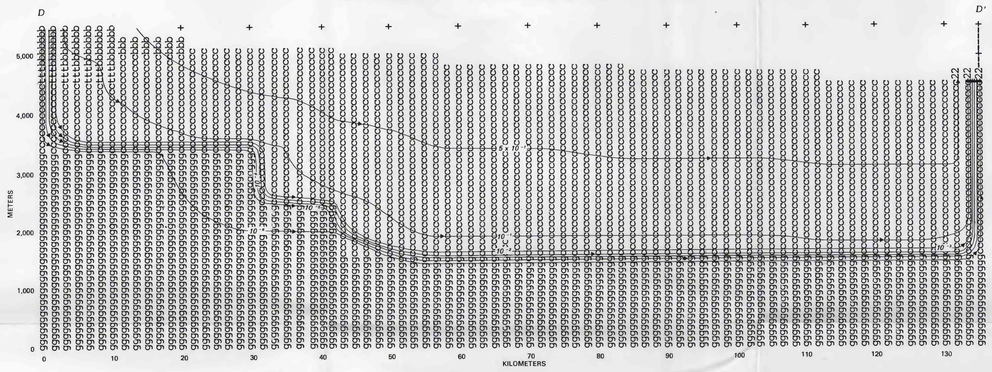

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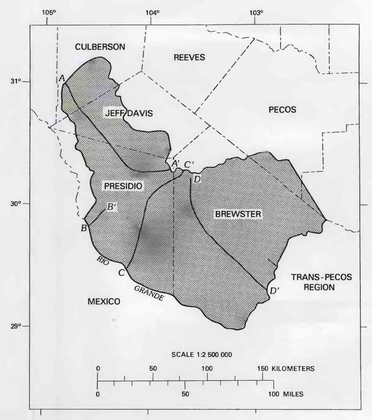

LOCATION OF MODELED HYDROGEOLOGIC SECTIONS

EXPLANATION

GEOLOGIC UNITS

- QTb — BASIN FILL (QUATERNARY AND TERTIARY) - Alluvium, sand, silt, gravel, landslide deposits, and minor evaporites
- Tt — ASH-FLOW TUFF AND TUFFACEOUS SEDIMENTS (TERTIARY) - Ash-flow tuff, rhyolite, trachyte and associated sandstone, conglomerate, and nonmarine limestone
- Td — DUFF FORMATION (TERTIARY) - Rhyolitic tuff and minor sandstone and conglomerate
- Tb — BASALTIC LAVA FLOWS (TERTIARY) - Mafic flows, trachyte, rhyolite, and interbedded tuff and nonmarine limestone
- Ti — QUARTZ MONZONITE INTRUSIVE (TERTIARY) - Occurs as a stock, Chinati Mountains
- Tv — TERTIARY VOLCANIC ROCKS - Rhyolitic to basaltic lava and silicic ash-flow tuffs
- Ku — UPPER CRETACEOUS ROCKS - Clay, shale, sandstone, siltstone, limestone, chalk, and lignite
- Kl — LOWER CRETACEOUS ROCKS - Predominantly limestone in the upper part of the section, grading into sandstone, shale, limestone, clay, and conglomerate in the lower part of the section
- Pu — PERMIAN ROCKS - Predominantly limestone in the upper part of the section, grading into sandstone, shale, limestone, clay, and conglomerate in the lower part of the section
- Pl — PERMIAN ROCKS (LEONARDIAN) - Shale, chert, limestone, and interbedded conglomerate
- Ph — HUECO LIMESTONE (PERMIAN) - Limestone
- Pw — PERMIAN ROCKS (WOLFCAMPIAN) - Sandstone, shale, limestone, and conglomerate
- Pzml — MIDDLE AND LOWER PALEOZOIC ROCKS (EXCLUDING PERMIAN) - Sandstone, shale, limestone, novaculite, and chert
- Pzm — PALEOZOIC ROCKS OF THE MARATHON BASIN - Sandstone, novaculite, limestone, dolomite, and shale
- pGu — PRECAMBRIAN ROCKS, UNDIFFERENTIATED - Sandstone, arkose, and interbedded conglomerate, metaquartzite, amphibolite, phyllite, mica, schist, and slate
- pGc — CARRIZO MOUNTAIN GROUP (PRECAMBRIAN) - Quartzite, meta-arkose, slate, schist, metarhyolite, metabasalt, pegmatite, granodiorite, and carbonate rocks
- GEOLOGIC CONTACT - Dashed where approximately located; queried where doubtful
- FAULT - Arrows show relative direction of movement

HYDROGEOLOGIC UNITS		CORRESPONDING UNITS ON GEOLOGIC SECTIONS
a	BASIN FILL	QTb
b	BASALTIC LAVA FLOWS	Tb
c	CARBONATE ROCKS	Ku, Kl, Pu, Pl, Ph, Pw, Pzml, Pzm
G	CRYSTALLINE ROCKS - Upper part of section	pGu, pGc Ti
g	CRYSTALLINE ROCKS-Lower part of section	pGu, pGc, Ti
t	ASH-FLOW TUFF AND TUFFACEOUS SEDIMENTS	Tt, Td
v	VOLCANIC ROCKS-Undifferentiated	Tv
2	DISCHARGE AREA	

- DIRECTION OF GROUND-WATER FLOW - Number is dimensionless relative volume of flow in section below flow line
- 10^1 — RELATIVE TRAVELTIME - From points on line to discharge area; dimensionless. Areas of longest traveltimes originate in the recharge area. No isolated areas of shorter traveltime are surrounded by areas of longer traveltime. Some areas of longest traveltime are too small to portray at scale shown
- A——A' LINE OF SECTION

HYDROGEOLOGIC SECTIONS SHOWING GROUND-WATER FLOW PATHS AND RELATIVE TRAVELTIME, TRANS-PECOS REGION, TEXAS