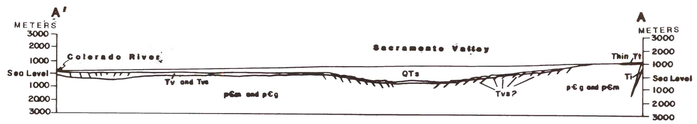
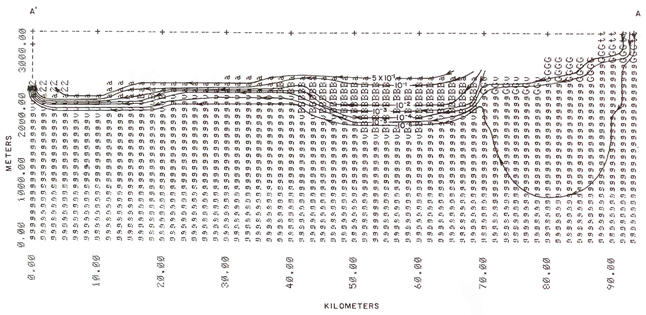
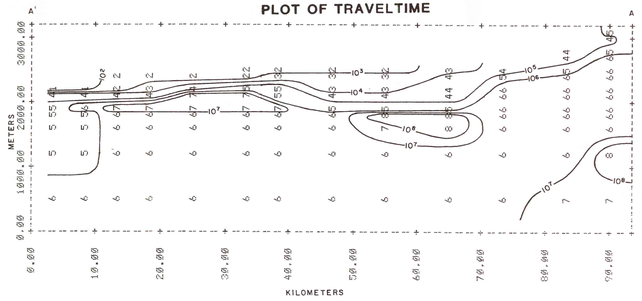
GEOLOGIC SECTION



MODELED LITHOLOGY AND FLOW PATHS



PLOT OF TRAVELTIME



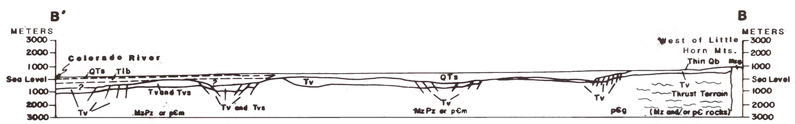
EXPLANATION
GEOLOGIC SECTIONS

SYMBOL	DESCRIPTION	GEOLOGIC UNITS
Qb	BASALT (QUATERNARY)	
QTs	BASIN FILL (QUATERNARY AND TERIARTY)	-- Clay, silt, sand, and gravel; lower part more compact, dense
Tlb	BOUSE FORMATION (TERTIARY)	-- Clay, silt, sand, and limestone along Colorado River
Tt	TUFF (TERTIARY)	-- Tuff, andesite, rhyolitic lava flows, agglomerate, and lesser amounts of basalt
Tv	UNDIFFERENTIATED VOLCANIC ROCKS (TERTIARY)	-- Andesite, andesite flow-breccia, minor basalt flows, welded ash-flow tuffs, and rhyolite flows and domes
Tvs	SILICIC ASH-FLOW TUFF (TERTIARY))	--
Tb	BASALT (TERTIARY)	--
MzPzm	LOw-GRADE METAMORPHIC ROCKS (MESOZOIC AND PALEOZOIC)	-- Regionally metamorphosed sediments and volcanics
p€m	HIGH-GRADE METAMORPHIC ROCKS (PRECAMBRIAN)	-- Gneiss, schist, and small plutons
INTRUSIVE ROCKS		
Ti	INTRUSIVE ROCKS (TERTIARY)	-- Sills, plugs, and dikes
TKi	INTRUSIVE ROCKS (PALEOCENE AND LATE CRETACEOUS)	-- Predominantly granite and quartz monzonite and minor diorite and dike swarms
TKg	GRANITIC ROCKS (TERTIARY OR CRETACEOUS)	--
Mzg	GRANITIC ROCKS (MESOZOIC)	-- Mostly quartz monzonite
p€g	GRANITIC ROCKS (PRECAMBRIAN)	-- Granite, quartz monzonite and granodiorite

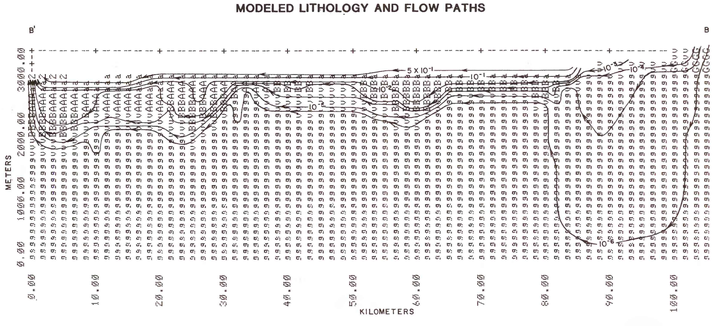
——— GEOLOGIC CONTACT

———— FAULT -- Arrows show relative direction of movement

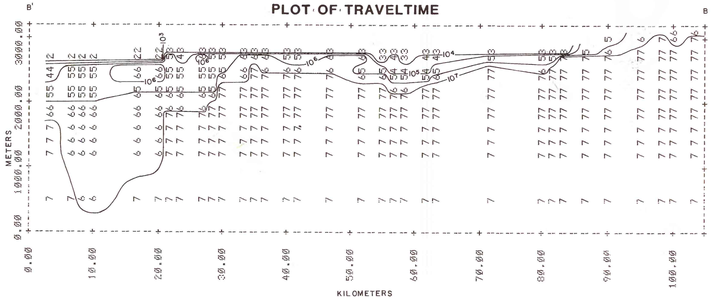
GEOLOGIC SECTION



MODELED LITHOLOGY AND FLOW PATHS



PLOT OF TRAVELTIME



EXPLANATION
HYDROGEOLOGIC SECTIONS

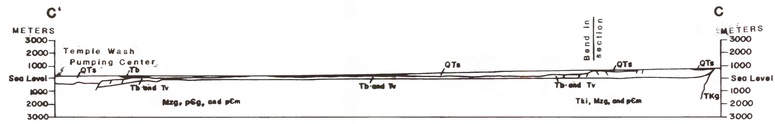
SYMBOL	HYDROGEOLOGIC UNITS	SYMBOLS ON GEOLOGIC SECTIONS
a	COARSE-GRAINED UPPER BASIN FILL	QTs
B	COARSE-GRAINED LOWER BASIN FILL	QTs
A	FINE-GRAINED BASIN FILL	Tlb
t	ASH-FLOW TUFF	Tt
v	UNDIFFERENTIATED VOLCANIC ROCKS	Tv, Tvs, and Tb
g	CRYSTALLINE ROCKS, LOWER PART OF SECTION	MzPz, p€m, Ti, TKi, TKg, Mzg, and p€g
G	CRYSTALLINE ROCKS, UPPER PART OF SECTION	p€m, Ti, TKg, Mzg, and p€g

——10^{-2}——→ DIRECTION OF GROUND-WATER FLOW -- Number indicates relative volume of flow in section below flow line

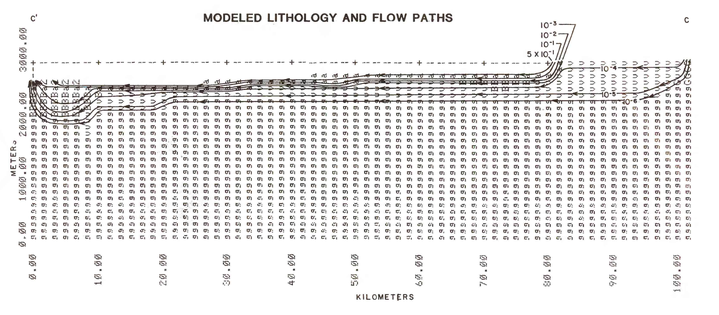
——10^{2}——— RELATIVE TIME OF TRAVEL FROM POINTS ON LINE TO DISCHARGE AREA

Areas of longest traveltimes originate in the recharge area. No isolated areas of long traveltime are surrounded by areas of shorter traveltime. However, some areas of longest traveltime are too small to portrey at the scale shown.

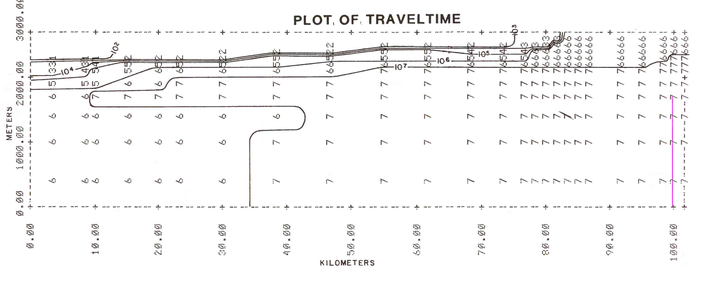
GEOLOGIC SECTION



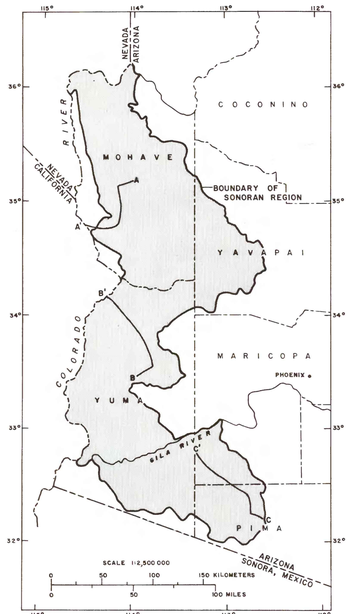
MODELED LITHOLOGY AND FLOW PATHS



PLOT OF TRAVELTIME



HYDROGEOLOGIC SECTIONS A-A', B-B', AND C-C', SHOWING GROUND-WATER FLOW PATHS AND RELATIVE TRAVELTIME, SONORAN REGION, ARIZONA.



LOCATION OF MODELED HYDROGEOLOGIC SECTIONS, SONORAN REGION, ARIZONA