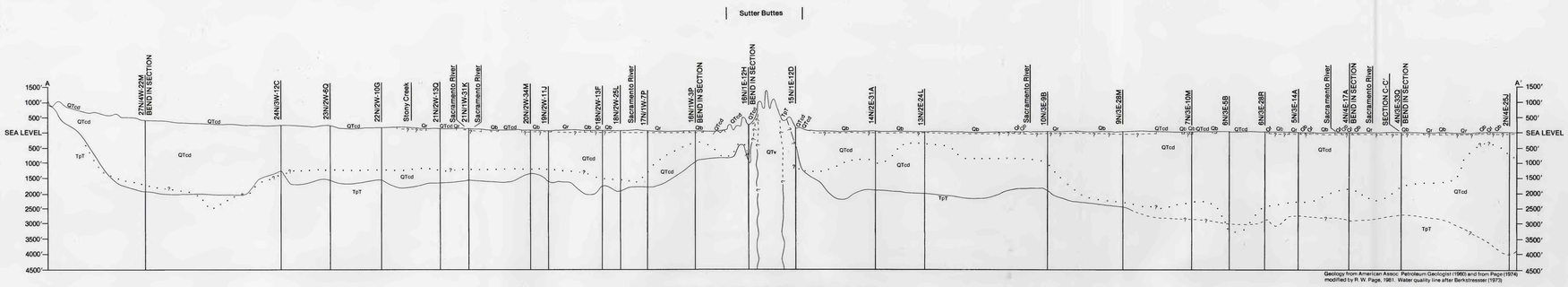
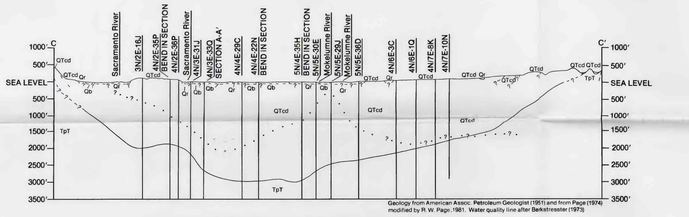


Geology from American Assoc. Petroleum Geologist (1960) and from Page (1974) modified by R. W. Page, 1981. Water quality line after Berkstresser (1973)

Geologic section A - A', Sacramento Valley, California
(See Plate 1 for location of section)

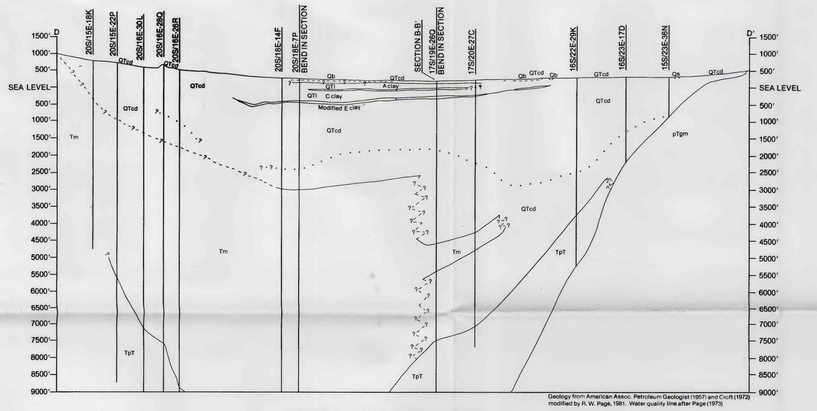
Geology from American Assoc. Petroleum Geologist (1958a,b) and from Croft (1972) modified by R. W. Page, 1981. Water quality line after Page (1973)

Geologic section B - B', San Joaquin Valley, California
(See Plate 2 for location of section)



Geology from American Assoc. Petroleum Geologist (1951) and from Page (1974) modified by R. W. Page, 1981. Water quality line after Berkstresser (1973)

Geologic section C - C', Sacramento Valley, California
(See Plate 1 for location of section)



Geology from American Assoc. Petroleum Geologist (1957) and Croft (1972) modified by R. W. Page, 1981. Water quality line after Page (1973)

Geologic section D - D', San Joaquin Valley, California
(See Plate 2 for location of section)

EXPLANATION OF SYMBOLS

Stratigraphic unit contact Approximately located; queried where data are inconclusive

Water quality line Below line dissolved - solids concentration greater than about 2,000 milligrams per liter; queried where data are inconclusive

20S/15E - 18K **Well and number**

SCALE
0 1 2 3 4 5 6 MILES

VERTICAL EXAGGERATION x 21

CORRELATION OF SECTION UNITS

SACRAMENTO VALLEY			SAN JOAQUIN VALLEY		
Qb Qr	Holocene	QUATERNARY	Qs Qb Qr	Holocene	QUATERNARY
QTcd	Oligocene to Holocene	TERTIARY AND QUATERNARY	QTI	Pliocene to Holocene	TERTIARY AND QUATERNARY
QTv	Pliocene and Pleistocene	TERTIARY	QTcd	Oligocene to Holocene	
TpT	Pre-Tertiary to Eocene	TERTIARY AND PRE-TERTIARY	Tm	Eocene, Oligocene, Miocene, and Pliocene	TERTIARY
			TpT	Pre-Tertiary to Oligocene	TERTIARY AND PRE-TERTIARY
			pTgm	Pre-Tertiary	PRE-TERTIARY

DESCRIPTION OF SECTION UNITS

SACRAMENTO VALLEY SECTION A - A' and C - C'

Qb Flood-basin deposits (Holocene) Clay, silt, and some sand;

Qr River deposits (Holocene) Gravel, sand, silt, and minor amounts of clay deposited along channels, flood plains, and natural levees of major streams. In places may include part of the Modesto Formation (Pleistocene)

QTcd Continental rocks and deposits (Oligocene to Holocene) Chiefly heterogeneous mix of gravel, sand, silt, and clay, some cobbles and boulders, sandstone, breccia, and conglomerate. Principal unit, continental rocks and deposits (Pliocene to Holocene)...

QTv Volcanic rocks (Pliocene and Pleistocene) Andesitic and rhyolitic porphyry and tuff at core of Sutter Buttes

TpT Continental and marine rocks and deposits (Pre-Tertiary to Eocene) Continental rocks and deposits, chiefly sandstone with some conglomerate and shale; marine rocks and deposits of clay, shale, siltstone, and sandstone ...

A - A'	C - C'
In southern part of section consist of muck, peat, and other organic soils. In places may include part of the Modesto Formation (Pleistocene)	In western part of section consist of muck, peat, and other organic soils. In places may include part of the Modesto Formation (Pleistocene)
Description at left	Description at left
On this section include volcanic rocks and deposits at Sutter Buttes (Pliocene and Pleistocene) of tuff and tuff breccia. Also on this section may include volcanic rocks and deposits (Miocene and Pliocene), continental rocks and deposits (Miocene and Pliocene)–mostly Mehrten Formation or an equivalent, and continental rocks and deposits (Oligocene and Miocene)–mostly Valley Springs Formation or an equivalent	On this section include some volcanic rocks and deposits (Miocene and Pliocene) near western side, continental rocks and deposits (Miocene and Pliocene)–mostly Mehrten Formation on eastern side, and may include Mehrten or an equivalent near central part, and continental rocks and deposits (Oligocene and Miocene)–mostly Valley Springs Formation on eastern side, and may include Valley Springs or an equivalent near central part
Description at left	Not present
On this section include continental rocks and deposits (Eocene)–mostly Ione Formation or an equivalent, marine rocks and deposits (Paleocene and Eocene), and marine rocks (Pre-Tertiary)	On this section include continental rocks and deposits (Eocene)–mostly Ione Formation on eastern side, and Ione or an equivalent near central part, marine rocks and deposits (Paleocene to Oligocene), and marine rocks (Pre-Tertiary)

SAN JOAQUIN VALLEY SECTION B - B' and D - D'

Qs Sand dunes (Holocene) Windblown sand and dune sand

Qb Flood-basin deposits (Holocene) Clay, silt, and some sand;

Qr River deposits (Holocene) Gravel, sand, silt, and minor amounts of clay; deposited along channels, flood plains, and natural levees of main streams.

QTI Lacustrine and marsh deposits (Pliocene to Holocene) Clay, silt, and some sand; in subsurface include three widespread clays: A clay (Pleistocene and Holocene?), C clay (Pleistocene); and modified E clay (Pleistocene), includes Corcoran Clay Member of Tulare Formation

QTcd Continental rocks and deposits (Oligocene to Holocene) Heterogeneous mix of generally poorly sorted clay, silt, sand, and gravel, some beds of claystone, siltstone, sandstone, and conglomerate...

Tm Marine rocks and deposits (Eocene, Oligocene, Miocene, and Pliocene) Sand, clay, silt, sandstone, shale, mudstone, and siltstone. On these section include marine rocks and deposits of Miocene and Pliocene age only

TpT Continental and marine rocks and deposits (Pre-Tertiary to Oligocene) Continental rocks and deposits of clay, shale, sand, sandstone and conglomerate; marine rocks and deposits of clay, shale, sandstone, and conglomerate...

pTgm Granitic and metamorphic rocks (Pre-Tertiary) Granitic rocks with some mafic intrusive rocks, and metasedimentary and metavolcanic rocks. Include granitic rocks (Pre-Tertiary) and metamorphic rocks (Pre-Tertiary)

B - B'	D - D'
Description at left	Description at left
Near northern end of section consist of muck, peat, and other organic soils	Description at left
Description at left	Not present
Description at left	Description at left
On this section, principal unit, continental rocks and deposits (Miocene to Holocene)- in northern part of section may include continental rocks and deposits (Miocene and Pliocene)–mostly Mehrten Formation or an equivalent, and continental rocks and deposits (Oligocene and Miocene) -mostly Valley Springs Formation or an equivalent. Include continental rocks and deposits (Miocene and Pliocene)–chiefly the Chanac Formation (Miocene) at extreme southern end of section, and the Zilch Formation of informal subsurface usage, which is considered to be the continental equivalent of the Marine Temblor Formation (Oligocene and Miocene)	On this section, principal unit continental rocks and deposits (Miocene to Holocene); at depth include the Zilch formation of informal subsurface usage, which is considered to be the continental equivalent of the marine Temblor Formation (Oligocene and Miocene)
Description at left	Description at left
On this section include marine rocks and deposits of Eocene and Oligocene age, also include some Paleocene marine rocks. Include continental rocks and deposits (Eocene to Miocene)-- chiefly Walker Formation (Eocene to Miocene) at depths off the section - greater than 13,000ft, where the Walker Formation underlies Eocene, marine sediments. Include marine rocks (Pre-Tertiary)	On this section include marine rocks and deposits of Eocene and Oligocene age, some Paleocene marine rocks, some unnamed continental rocks (Pre-Tertiary age) on eastern end of section, and marine rocks (Pre-Tertiary)
Not present	Description at left

GEOLOGIC SECTIONS A - A' THROUGH D - D', SACRAMENTO VALLEY AND SAN JOAQUIN VALLEY, CALIFORNIA