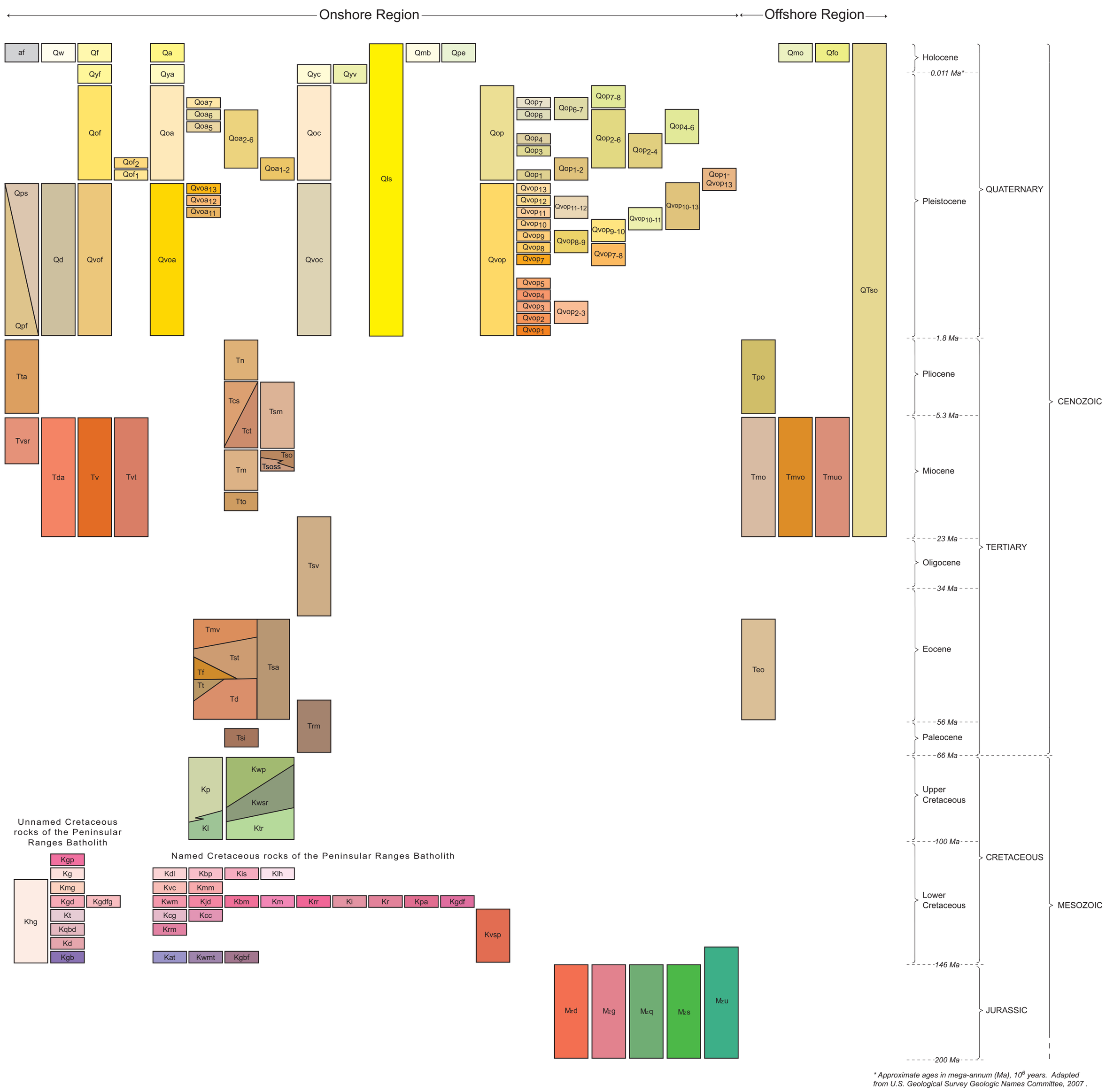
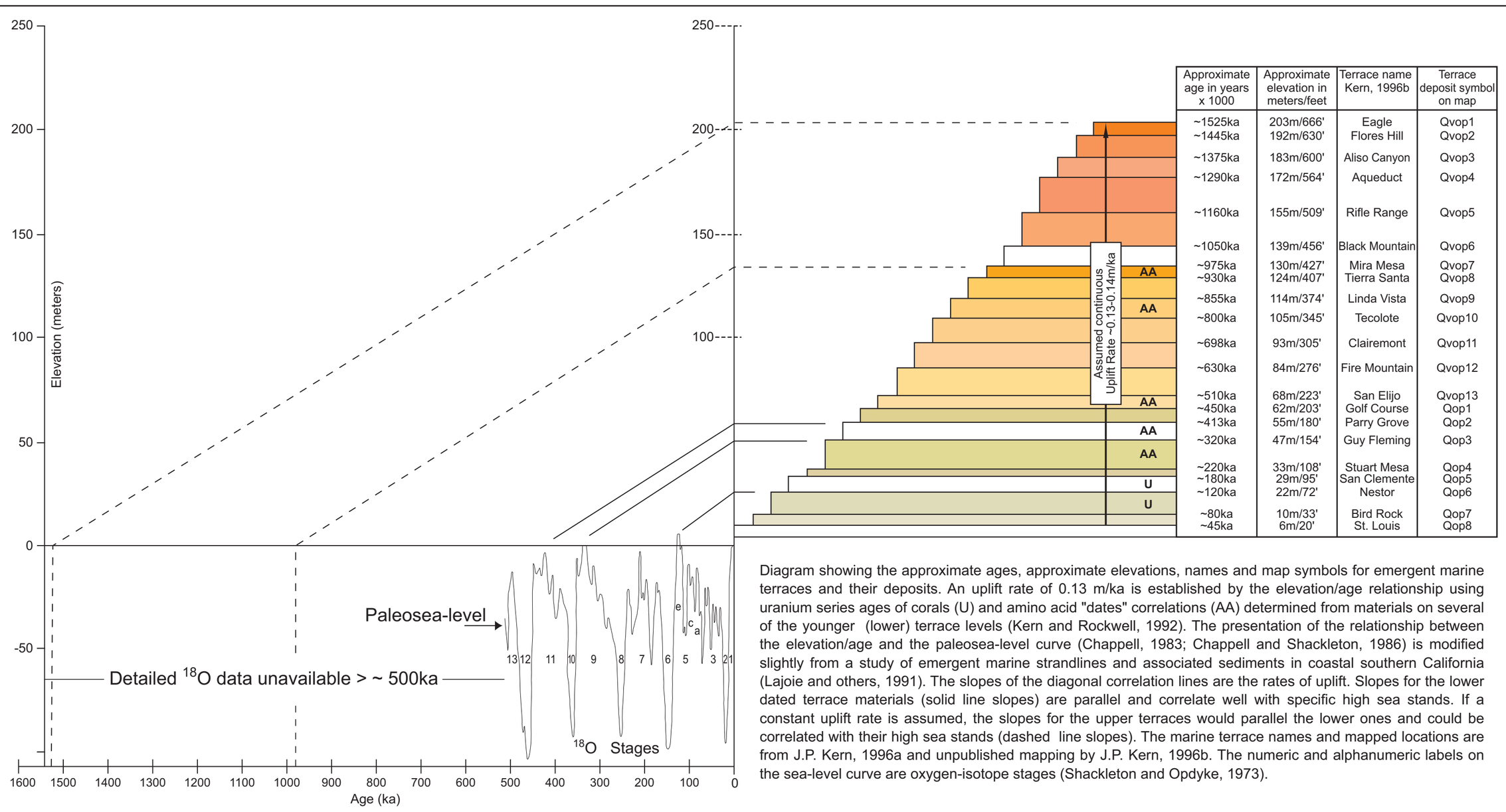


CORRELATION OF MAP UNITS FOR THE GEOLOGIC MAP OF THE OCEANSIDE 30' x 60' QUADRANGLE, CALIFORNIA



Approximate age in years x 1000	Approximate elevation in meters/feet	Terrace name Kern, 1996b	Terrace deposit symbol on map
~1525ka	203m/666'	Eagle	Qvop1
~1445ka	192m/630'	Flores Hill	Qvop2
~1375ka	183m/600'	Aliso Canyon	Qvop3
~1290ka	172m/564'	Aqueduct	Qvop4
~1160ka	155m/509'	Rifle Range	Qvop5
~1050ka	139m/456'	Black Mountain	Qvop6
~975ka	130m/427'	Mira Mesa	Qvop7
~930ka	124m/407'	Tierra Santa	Qvop8
~855ka	114m/374'	Linda Vista	Qvop9
~800ka	105m/345'	Tecolote	Qvop10
~698ka	93m/305'	Clairemont	Qvop11
~630ka	84m/276'	Fire Mountain	Qvop12
~510ka	68m/223'	San Elijo	Qvop13
~450ka	62m/203'	Golf Course	Qop1
~413ka	55m/180'	Parry Grove	Qop2
~320ka	47m/154'	Guy Fleming	Qop3
~220ka	33m/108'	Stuart Mesa	Qop4
~180ka	29m/95'	San Clemente	Qop5
~120ka	22m/72'	Nestor	Qop6
~80ka	10m/33'	Bird Rock	Qop7
~45ka	6m/20'	St. Louis	Qop8

Diagram showing the approximate ages, approximate elevations, names and map symbols for emergent marine terraces and their deposits. An uplift rate of 0.13 m/ka is established by the elevation/age relationship using uranium series ages of corals (U) and amino acid "dates" correlations (AA) determined from materials on several of the younger (lower) terrace levels (Kern and Rockwell, 1992). The presentation of the relationship between the elevation/age and the paleosea-level curve (Chappell, 1983; Chappell and Shackleton, 1986) is modified slightly from a study of emergent marine strandlines and associated sediments in coastal southern California (Lajoie and others, 1991). The slopes of the diagonal correlation lines are the rates of uplift. Slopes for the lower dated terrace materials (solid line slopes) are parallel and correlate well with specific high sea stands. If a constant uplift rate is assumed, the slopes for the upper terraces would parallel the lower ones and could be correlated with their high sea stands (dashed line slopes). The marine terrace names and mapped locations are from J.P. Kern, 1996a and unpublished mapping by J.P. Kern, 1996b. The numeric and alphanumeric labels on the sea-level curve are oxygen-isotope stages (Shackleton and Opdyke, 1973).

CHRONOLOGY OF MARINE TERRACES AND THEIR DEPOSITS