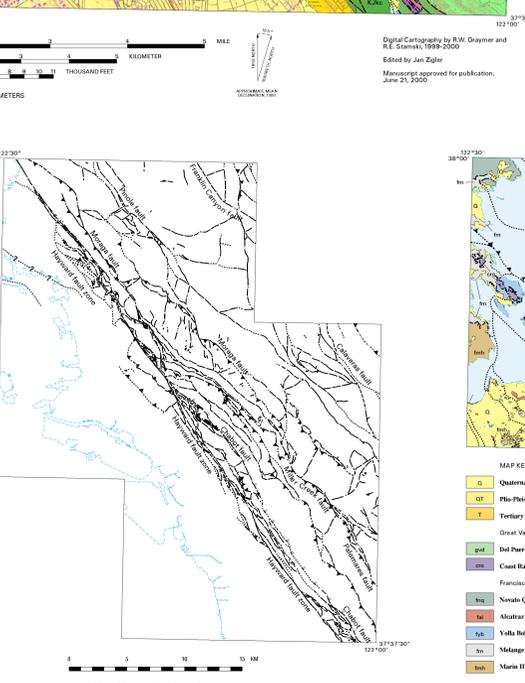
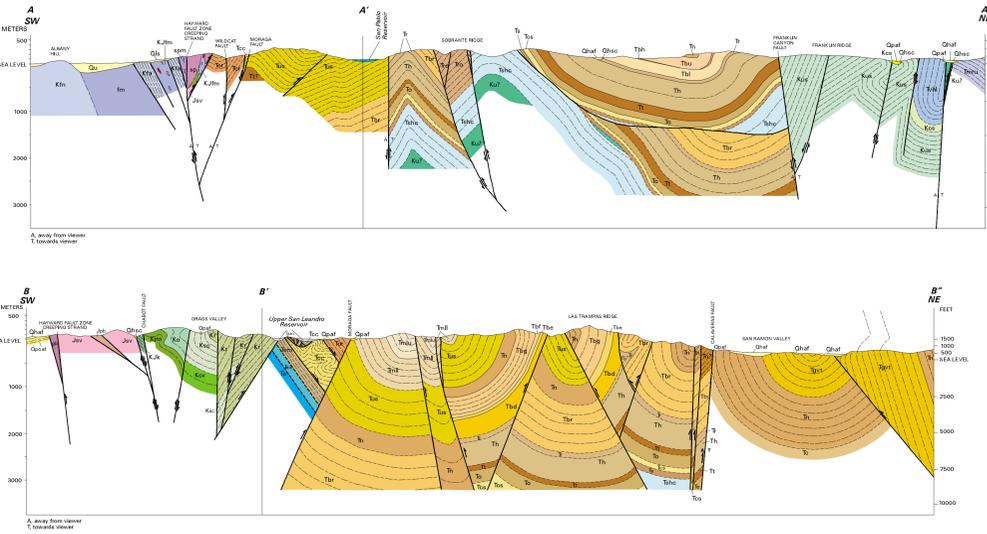
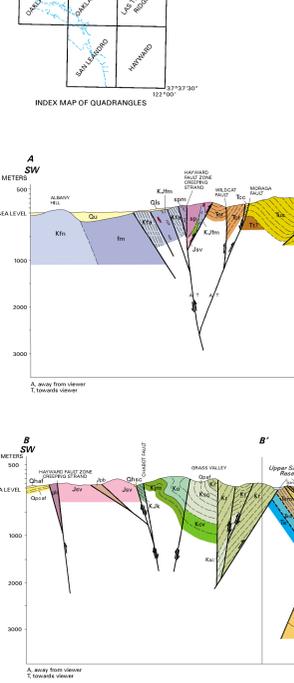
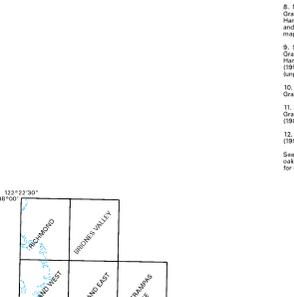


EXPLANATION
 Quaternary surficial deposits modified from Helley and Graymer (1997a,b).
 1. Extensive new mapping by author, modifying Graymer and others (1994), Wagner (1978), Power (1956), and Dibble (1980a). Some data from Blake and others (1984).
 2. New mapping by author, modifying Graymer and others (1994), Wagner (1978), Power (1956), and Dibble (1980a).
 3. New mapping by author, modifying Graymer and others (1994), Dibble (1980a), and Blake and others (1984).
 4. New mapping by author, modifying Graymer and others (1994), Wagner (1978), Dibble (1980a), and Power (1956).
 5. New mapping by author in the small area of basaltic exposure. Well logs based from Blake and others (1989). See also Rabinovich (1997).
 6. Some new mapping by author, modifying Graymer and others (1994), Rabinovich (1997), and Redwood and Case (1997).
 7. New mapping by author, modifying Graymer and others (1994), Redwood (1997), Wagner (1978), and Case (1997).
 8. New mapping by author, modifying Graymer and others (1994), Wagner (1978), Helm (1952), Dibble (1980a), Adams (1956), and Sorenson and S'wartz (unpublished maps, 1961&2).
 9. Some new mapping by author, modifying Graymer and others (1994), Wagner (1978), Helm (1952), Dibble (1980a), Adams (1956), and Sorenson and S'wartz (unpublished maps, 1961&2).
 10. New mapping by author, modifying Graymer and others (1994).
 11. New mapping by author, modifying Graymer and others (1994), Dibble (1980a), Redwood (1997), and Wagner (1978).
 12. Modified from Graymer and others (1994) and Wagner (1978).
 See the pamphlet (available online, <http://www.usgs.gov>), or contact the author for complete references.



GEOLOGIC MAP AND MAP DATABASE OF THE OAKLAND METROPOLITAN AREA, ALAMEDA, CONTRA COSTA, AND SAN FRANCISCO COUNTIES, CALIFORNIA

By
R.W. Graymer
 2000

Digital data and cartography prepared using ArcView 7.1.2 running under Solaris 9.0 on a UNIX workstation.
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