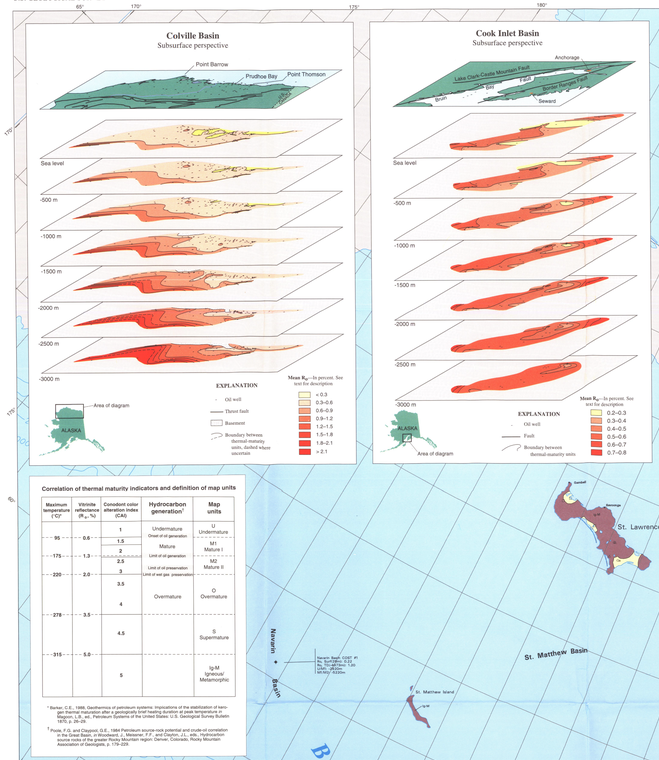



**EXPLANATION**

Oil well
Thrust fault
Basement
Boundary between thermal-maturity units, dashed where inferred

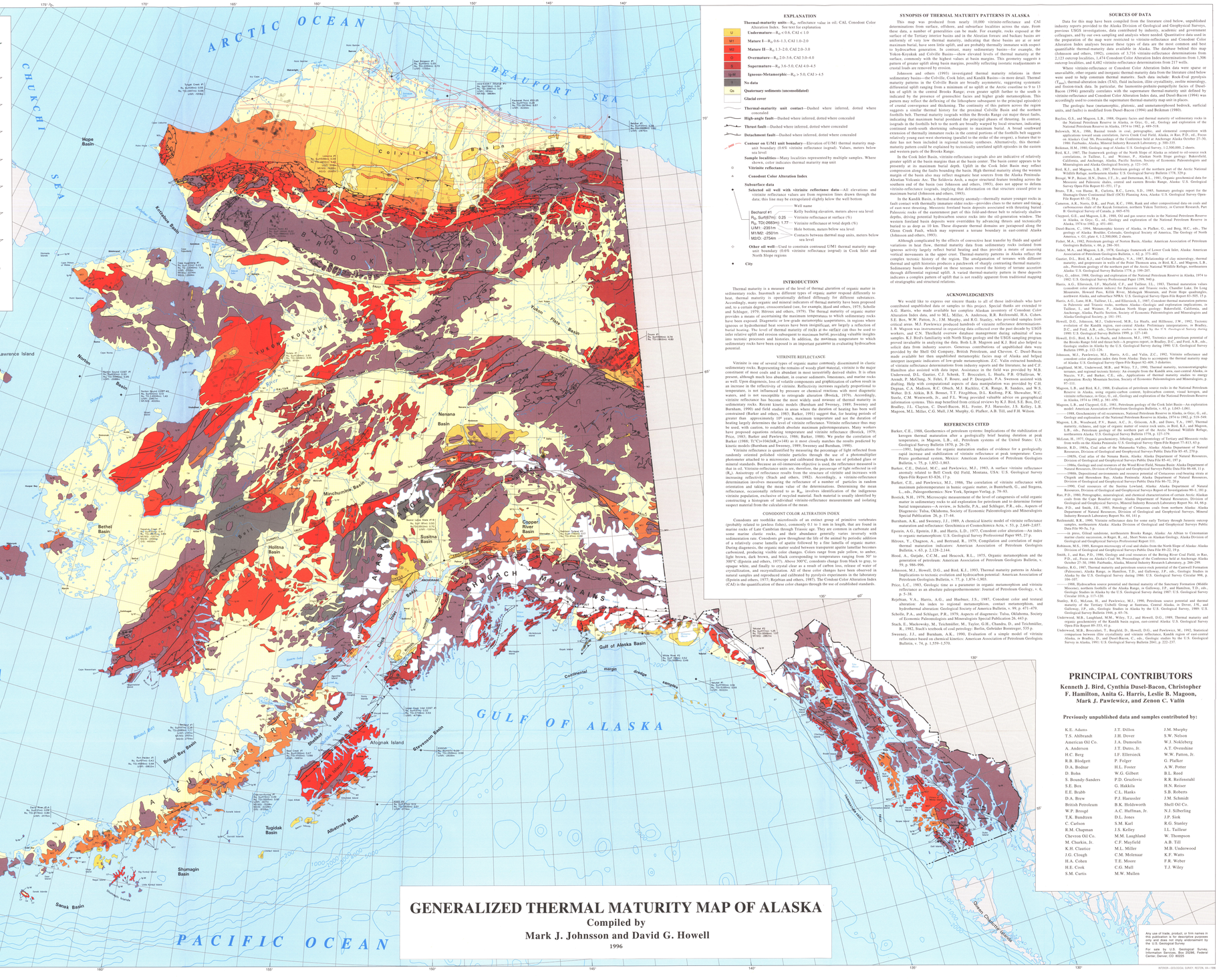
Mean $R_{o(t)}$—In percent. See text for description
< 0.3
0.3–0.4
0.4–0.6
0.6–0.9
0.9–1.2
1.2–1.5
1.5–1.8
1.8–2.1
> 2.1

**Correlation of thermal maturity indicators and definition of map units**

| Maximum temperature (°C)[1] | Vitrinite reflectance ($R_o$—%) | Conodont color alteration index (CAI) | Hydrocarbon indicator | Map units |
|---|---|---|---|---|
| 95 | 0.6 | 1 | Undermature | U Undermature |
| | | 1.5 | Onset of oil generation | M1 Mature I |
| 175 | 1.3 | 2 | Mature | M2 Mature II |
| | | 2.5 | Limit of oil generation | M3 Mature III |
| 220 | 2.0 | 3 | Limit of oil preservation | |
| | | 3.5 | Overmature | O Overmature |
| 278 | 3.5 | 4 | | S Supermature |
| | | 4.5 | | Ig-M Igneous/ Metamorphic |
| 315 | 5.0 | 5 | | |

[1] Barker, C.E., 1988, Geochemics of petroleum systems: Implications of the stabilization of kerogen thermal maturation after a geologically brief heating duration at peak temperature: *in* Magoon, L.B., ed., Petroleum Systems of the United States: U.S. Geological Survey Bulletin 1870, p. 26–29.

[2] Fouch, T.D., and Claypool, G.E., 1984 Petroleum source-rock potential and crude-oil correlation in the Great Basin: *in* Woodward, J., Meissner, F.F., and Clayton, J.L., eds., Hydrocarbon source rocks of the greater Rocky Mountain region: Denver, Colorado, Rocky Mountain Association of Geologists, p. 179–229.


ARCTIC OCEAN
BEAUFORT SEA
CHUKCHI SEA
BERING SEA
GULF OF ALASKA
PACIFIC OCEAN
ALEUTIAN ISLANDS
Colville
Hope Basin
Kotzebue Basin
Norton Basin
Nenana Basin
Yukon Flats Basin
Minchumina Basin
Bethel Basin
Holitna Basin
Susitna Basin
Copper River Basin
Cook Inlet Basin
Shelikof Basin
Stevenson Basin
Bristol Bay Basin
St. George Basin
Pribilof Basin
Zemchug Basin
Navarin Basin
St. Lawrence Island
St. Matthew Island
St. Paul Island
Nunivak Island
Kodiak Island
Afognak Island
Tugidak Basin
Albatross Basin
Shumagin Basin
Sanak Basin
Gulf of Alaska Basin
Continental margin dredge samples
Queen Charlotte Islands
Brooks Range
Alaska Range
Wrangell Mountains
Chugach Mountains
Kenai Peninsula
Alaska Peninsula
Aleutian Range
Brooks Arch
Barrow Arch
Kaltag Fault
Denali Fault
Lake Clark-Castle Mountain Fault
Bristol Bay
Cook Inlet
Prudhoe Bay
Point Thomson
Point Barrow
Seward
Homer
Kenai
Anchorage
Nome
Bethel
Dillingham
Kotzebue
Unalakleet
Galena
Fairbanks
Tanana
Bettles
Kaltag
Ketchikan
Sitka
Yakutat
Cordova
Valdez
Kodiak
Dutch Harbor
Cold Bay
Shemya
Adak
Unalaska
Cape Lisburne
Point Hope
Point Lay
Wainwright
Barrow
Umiat
Cape Thompson
Cape Newenham
Cape Romanzof
Cape Nome
Cape Prince of Wales
Cape Darby
Cape Denbigh
Cape Vancouver
Cape Rodney
Cape Lisburne
Cape Beaufort
Cape Sabine
Cape Simpson
Cape Lisburne
Cape Thompson
Cape Newenham
Cape Romanzof
Cape Nome
Cape Prince of Wales
Cape Darby
Cape Denbigh
Cape Vancouver
Cape Rodney