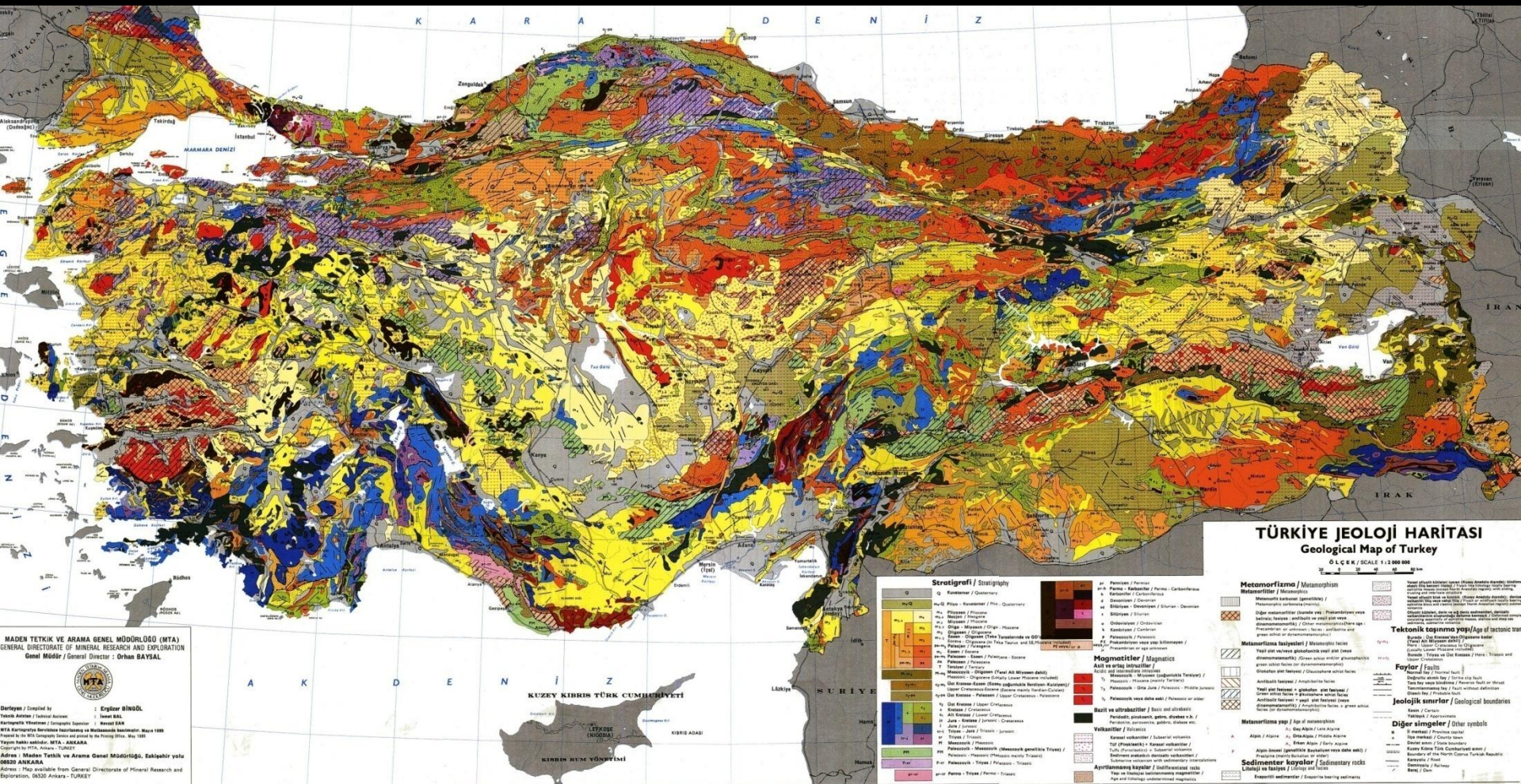


TÜRKİYE'NİN JEOLojİK EVRİMİ

Aral Okay

İstanbul Teknik Üniversitesi
Avrasya Yerbilimleri Enstitüsü ve Jeoloji Müh. Bölümü



TÜRKİYE JEOLJİ HARİTASI Geological Map of Turkey

ÖLÇEK / SCALE 1:250 000

MADEN TETKİK VE ARAMA GENEL MÜDÜRLÜĞÜ (MTA)
GENERAL DIRECTORATE OF MINERAL RESEARCH AND EXPLORATION
Genel Müdür / General Director : ÖRHAN BAYSAK



Derleyen / Compiled by : Ergülzer ÖNÖL
Tehnik Akademi / Technical Academy : İsmail BAL
Kartografya / Cartography : Mustafa KARAKÖK
MTA Kartografya Biriminde hazırlanmış ve Matbaasında basılmıştır. Mayıs 1988
Prepared by the MTA Cartography Unit and printed by the Printing Office, May 1988
Yayın hakkı saklıdır. MTA - ANKARA
Copyright © MTA, Ankara - TÜRKİYE
Adres : Maden Tetkik ve Arama Genel Müdürlüğü, Etiler İşleri Yolu
06530 ANKARA - TÜRKİYE
Address : Map available from General Directorate of Mineral Research and
Exploration, 06530 Ankara - TURKEY

Stratigrafi / Stratigraphy	
Q	Kuvaterner / Quaternary
Pu-Q	Pliosen - Kuvaterner / Pliocene - Quaternary
Pu	Pliosen / Pliocene
Pu-1	Alt Pliosen / Lower Pliocene
Pu-2	Orta Pliosen / Middle Pliocene
Pu-3	Yeni Pliosen / Recent Pliocene
Pu-4	Yeni Pliosen / Recent Pliocene
Pu-5	Yeni Pliosen / Recent Pliocene
Pu-6	Yeni Pliosen / Recent Pliocene
Pu-7	Yeni Pliosen / Recent Pliocene
Pu-8	Yeni Pliosen / Recent Pliocene
Pu-9	Yeni Pliosen / Recent Pliocene
Pu-10	Yeni Pliosen / Recent Pliocene
Pu-11	Yeni Pliosen / Recent Pliocene
Pu-12	Yeni Pliosen / Recent Pliocene
Pu-13	Yeni Pliosen / Recent Pliocene
Pu-14	Yeni Pliosen / Recent Pliocene
Pu-15	Yeni Pliosen / Recent Pliocene
Pu-16	Yeni Pliosen / Recent Pliocene
Pu-17	Yeni Pliosen / Recent Pliocene
Pu-18	Yeni Pliosen / Recent Pliocene
Pu-19	Yeni Pliosen / Recent Pliocene
Pu-20	Yeni Pliosen / Recent Pliocene
Pu-21	Yeni Pliosen / Recent Pliocene
Pu-22	Yeni Pliosen / Recent Pliocene
Pu-23	Yeni Pliosen / Recent Pliocene
Pu-24	Yeni Pliosen / Recent Pliocene
Pu-25	Yeni Pliosen / Recent Pliocene
Pu-26	Yeni Pliosen / Recent Pliocene
Pu-27	Yeni Pliosen / Recent Pliocene
Pu-28	Yeni Pliosen / Recent Pliocene
Pu-29	Yeni Pliosen / Recent Pliocene
Pu-30	Yeni Pliosen / Recent Pliocene
Pu-31	Yeni Pliosen / Recent Pliocene
Pu-32	Yeni Pliosen / Recent Pliocene
Pu-33	Yeni Pliosen / Recent Pliocene
Pu-34	Yeni Pliosen / Recent Pliocene
Pu-35	Yeni Pliosen / Recent Pliocene
Pu-36	Yeni Pliosen / Recent Pliocene
Pu-37	Yeni Pliosen / Recent Pliocene
Pu-38	Yeni Pliosen / Recent Pliocene
Pu-39	Yeni Pliosen / Recent Pliocene
Pu-40	Yeni Pliosen / Recent Pliocene
Pu-41	Yeni Pliosen / Recent Pliocene
Pu-42	Yeni Pliosen / Recent Pliocene
Pu-43	Yeni Pliosen / Recent Pliocene
Pu-44	Yeni Pliosen / Recent Pliocene
Pu-45	Yeni Pliosen / Recent Pliocene
Pu-46	Yeni Pliosen / Recent Pliocene
Pu-47	Yeni Pliosen / Recent Pliocene
Pu-48	Yeni Pliosen / Recent Pliocene
Pu-49	Yeni Pliosen / Recent Pliocene
Pu-50	Yeni Pliosen / Recent Pliocene
Pu-51	Yeni Pliosen / Recent Pliocene
Pu-52	Yeni Pliosen / Recent Pliocene
Pu-53	Yeni Pliosen / Recent Pliocene
Pu-54	Yeni Pliosen / Recent Pliocene
Pu-55	Yeni Pliosen / Recent Pliocene
Pu-56	Yeni Pliosen / Recent Pliocene
Pu-57	Yeni Pliosen / Recent Pliocene
Pu-58	Yeni Pliosen / Recent Pliocene
Pu-59	Yeni Pliosen / Recent Pliocene
Pu-60	Yeni Pliosen / Recent Pliocene
Pu-61	Yeni Pliosen / Recent Pliocene
Pu-62	Yeni Pliosen / Recent Pliocene
Pu-63	Yeni Pliosen / Recent Pliocene
Pu-64	Yeni Pliosen / Recent Pliocene
Pu-65	Yeni Pliosen / Recent Pliocene
Pu-66	Yeni Pliosen / Recent Pliocene
Pu-67	Yeni Pliosen / Recent Pliocene
Pu-68	Yeni Pliosen / Recent Pliocene
Pu-69	Yeni Pliosen / Recent Pliocene
Pu-70	Yeni Pliosen / Recent Pliocene
Pu-71	Yeni Pliosen / Recent Pliocene
Pu-72	Yeni Pliosen / Recent Pliocene
Pu-73	Yeni Pliosen / Recent Pliocene
Pu-74	Yeni Pliosen / Recent Pliocene
Pu-75	Yeni Pliosen / Recent Pliocene
Pu-76	Yeni Pliosen / Recent Pliocene
Pu-77	Yeni Pliosen / Recent Pliocene
Pu-78	Yeni Pliosen / Recent Pliocene
Pu-79	Yeni Pliosen / Recent Pliocene
Pu-80	Yeni Pliosen / Recent Pliocene
Pu-81	Yeni Pliosen / Recent Pliocene
Pu-82	Yeni Pliosen / Recent Pliocene
Pu-83	Yeni Pliosen / Recent Pliocene
Pu-84	Yeni Pliosen / Recent Pliocene
Pu-85	Yeni Pliosen / Recent Pliocene
Pu-86	Yeni Pliosen / Recent Pliocene
Pu-87	Yeni Pliosen / Recent Pliocene
Pu-88	Yeni Pliosen / Recent Pliocene
Pu-89	Yeni Pliosen / Recent Pliocene
Pu-90	Yeni Pliosen / Recent Pliocene
Pu-91	Yeni Pliosen / Recent Pliocene
Pu-92	Yeni Pliosen / Recent Pliocene
Pu-93	Yeni Pliosen / Recent Pliocene
Pu-94	Yeni Pliosen / Recent Pliocene
Pu-95	Yeni Pliosen / Recent Pliocene
Pu-96	Yeni Pliosen / Recent Pliocene
Pu-97	Yeni Pliosen / Recent Pliocene
Pu-98	Yeni Pliosen / Recent Pliocene
Pu-99	Yeni Pliosen / Recent Pliocene
Pu-100	Yeni Pliosen / Recent Pliocene

Metamorfizma / Metamorphism	
Mt	Metamorfizma / Metamorphism
Mt-1	Metamorfizma / Metamorphism
Mt-2	Metamorfizma / Metamorphism
Mt-3	Metamorfizma / Metamorphism
Mt-4	Metamorfizma / Metamorphism
Mt-5	Metamorfizma / Metamorphism
Mt-6	Metamorfizma / Metamorphism
Mt-7	Metamorfizma / Metamorphism
Mt-8	Metamorfizma / Metamorphism
Mt-9	Metamorfizma / Metamorphism
Mt-10	Metamorfizma / Metamorphism
Mt-11	Metamorfizma / Metamorphism
Mt-12	Metamorfizma / Metamorphism
Mt-13	Metamorfizma / Metamorphism
Mt-14	Metamorfizma / Metamorphism
Mt-15	Metamorfizma / Metamorphism
Mt-16	Metamorfizma / Metamorphism
Mt-17	Metamorfizma / Metamorphism
Mt-18	Metamorfizma / Metamorphism
Mt-19	Metamorfizma / Metamorphism
Mt-20	Metamorfizma / Metamorphism
Mt-21	Metamorfizma / Metamorphism
Mt-22	Metamorfizma / Metamorphism
Mt-23	Metamorfizma / Metamorphism
Mt-24	Metamorfizma / Metamorphism
Mt-25	Metamorfizma / Metamorphism
Mt-26	Metamorfizma / Metamorphism
Mt-27	Metamorfizma / Metamorphism
Mt-28	Metamorfizma / Metamorphism
Mt-29	Metamorfizma / Metamorphism
Mt-30	Metamorfizma / Metamorphism
Mt-31	Metamorfizma / Metamorphism
Mt-32	Metamorfizma / Metamorphism
Mt-33	Metamorfizma / Metamorphism
Mt-34	Metamorfizma / Metamorphism
Mt-35	Metamorfizma / Metamorphism
Mt-36	Metamorfizma / Metamorphism
Mt-37	Metamorfizma / Metamorphism
Mt-38	Metamorfizma / Metamorphism
Mt-39	Metamorfizma / Metamorphism
Mt-40	Metamorfizma / Metamorphism
Mt-41	Metamorfizma / Metamorphism
Mt-42	Metamorfizma / Metamorphism
Mt-43	Metamorfizma / Metamorphism
Mt-44	Metamorfizma / Metamorphism
Mt-45	Metamorfizma / Metamorphism
Mt-46	Metamorfizma / Metamorphism
Mt-47	Metamorfizma / Metamorphism
Mt-48	Metamorfizma / Metamorphism
Mt-49	Metamorfizma / Metamorphism
Mt-50	Metamorfizma / Metamorphism
Mt-51	Metamorfizma / Metamorphism
Mt-52	Metamorfizma / Metamorphism
Mt-53	Metamorfizma / Metamorphism
Mt-54	Metamorfizma / Metamorphism
Mt-55	Metamorfizma / Metamorphism
Mt-56	Metamorfizma / Metamorphism
Mt-57	Metamorfizma / Metamorphism
Mt-58	Metamorfizma / Metamorphism
Mt-59	Metamorfizma / Metamorphism
Mt-60	Metamorfizma / Metamorphism
Mt-61	Metamorfizma / Metamorphism
Mt-62	Metamorfizma / Metamorphism
Mt-63	Metamorfizma / Metamorphism
Mt-64	Metamorfizma / Metamorphism
Mt-65	Metamorfizma / Metamorphism
Mt-66	Metamorfizma / Metamorphism
Mt-67	Metamorfizma / Metamorphism
Mt-68	Metamorfizma / Metamorphism
Mt-69	Metamorfizma / Metamorphism
Mt-70	Metamorfizma / Metamorphism
Mt-71	Metamorfizma / Metamorphism
Mt-72	Metamorfizma / Metamorphism
Mt-73	Metamorfizma / Metamorphism
Mt-74	Metamorfizma / Metamorphism
Mt-75	Metamorfizma / Metamorphism
Mt-76	Metamorfizma / Metamorphism
Mt-77	Metamorfizma / Metamorphism
Mt-78	Metamorfizma / Metamorphism
Mt-79	Metamorfizma / Metamorphism
Mt-80	Metamorfizma / Metamorphism
Mt-81	Metamorfizma / Metamorphism
Mt-82	Metamorfizma / Metamorphism
Mt-83	Metamorfizma / Metamorphism
Mt-84	Metamorfizma / Metamorphism
Mt-85	Metamorfizma / Metamorphism
Mt-86	Metamorfizma / Metamorphism
Mt-87	Metamorfizma / Metamorphism
Mt-88	Metamorfizma / Metamorphism
Mt-89	Metamorfizma / Metamorphism
Mt-90	Metamorfizma / Metamorphism
Mt-91	Metamorfizma / Metamorphism
Mt-92	Metamorfizma / Metamorphism
Mt-93	Metamorfizma / Metamorphism
Mt-94	Metamorfizma / Metamorphism
Mt-95	Metamorfizma / Metamorphism
Mt-96	Metamorfizma / Metamorphism
Mt-97	Metamorfizma / Metamorphism
Mt-98	Metamorfizma / Metamorphism
Mt-99	Metamorfizma / Metamorphism
Mt-100	Metamorfizma / Metamorphism

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

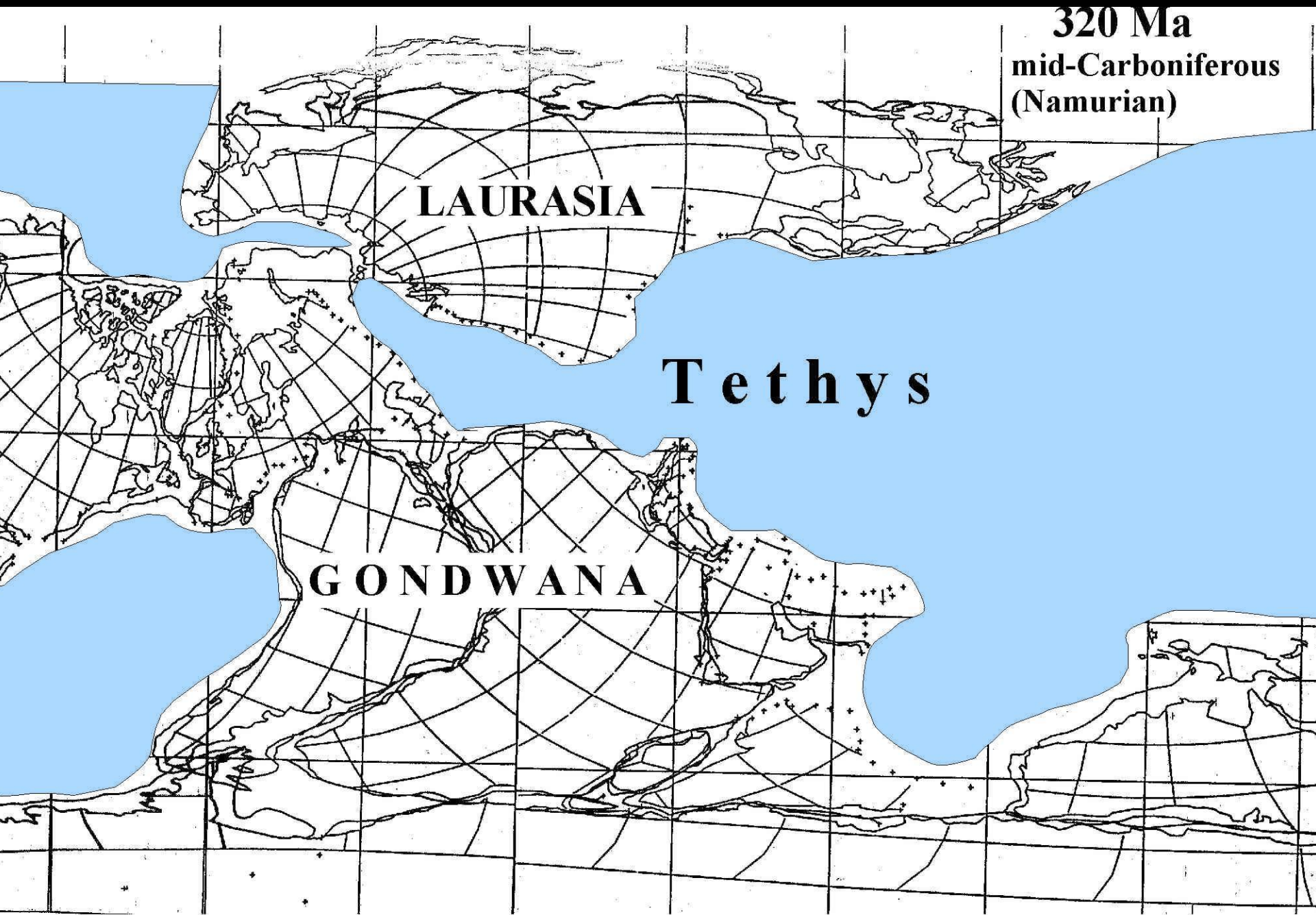
Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

Tektonik yapının yaşı / Age of tectonic structure

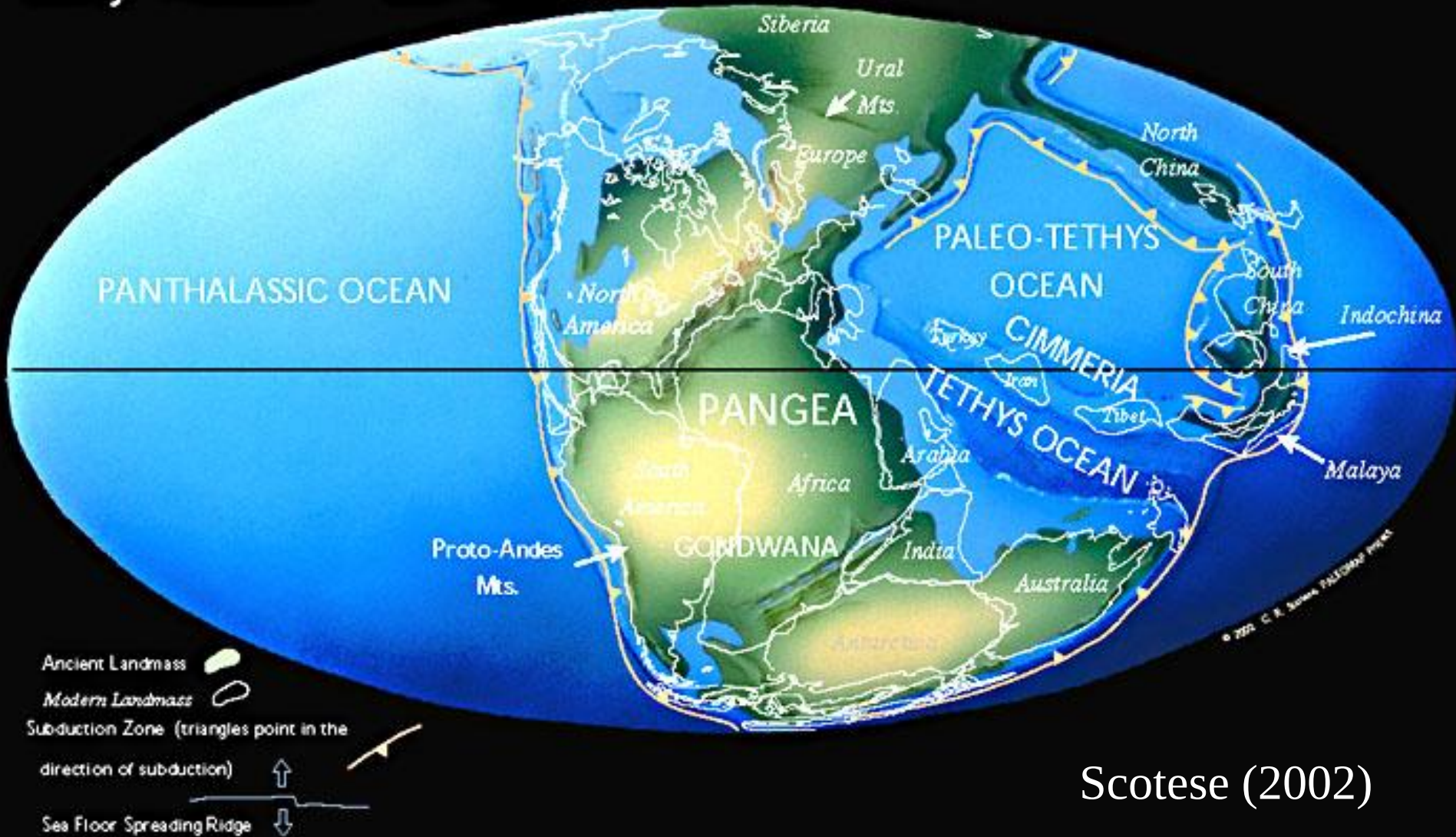


320 Ma
mid-Carboniferous
(Namurian)

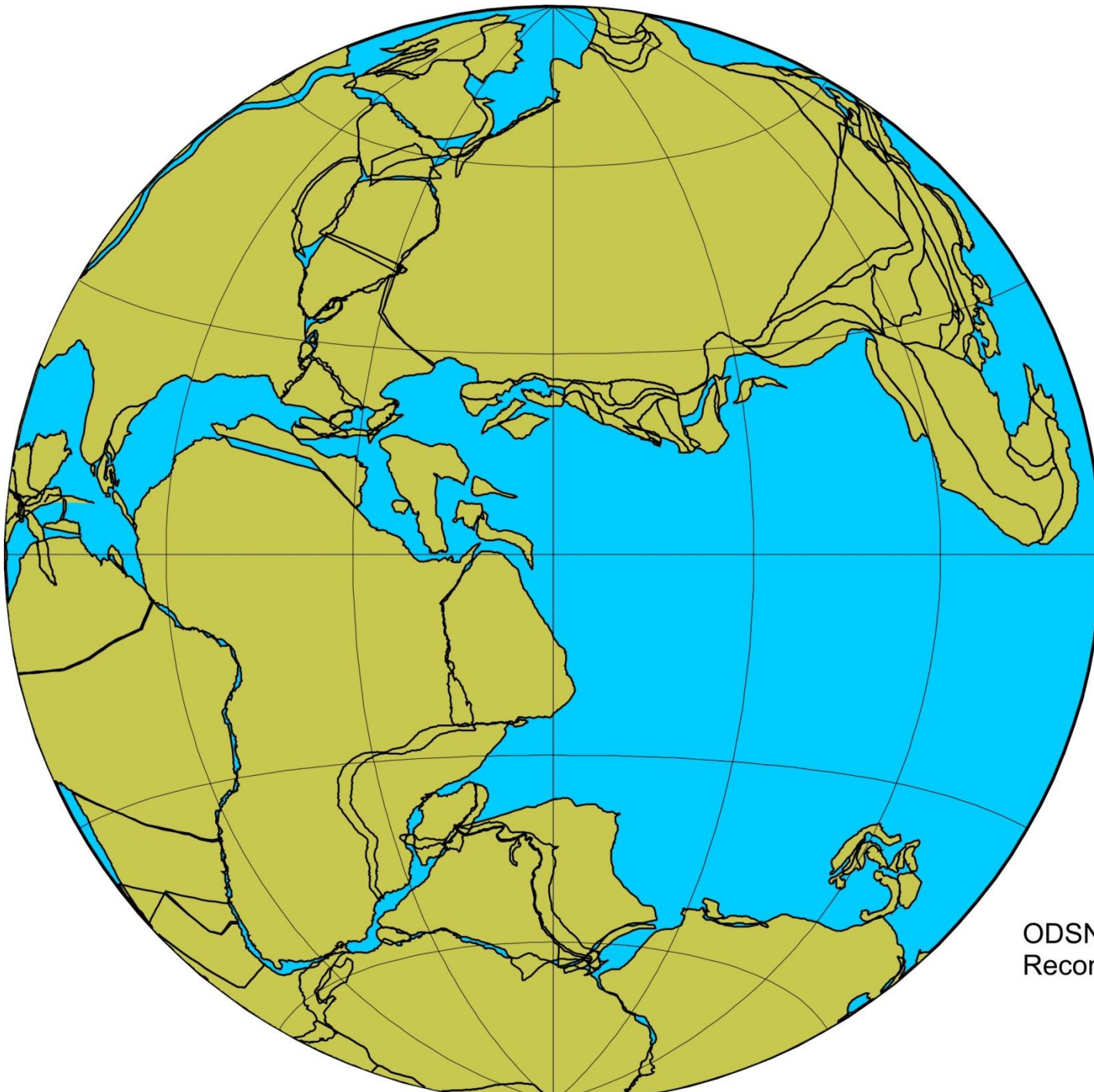


Smith et al. (1981)

Early Triassic 237 Ma

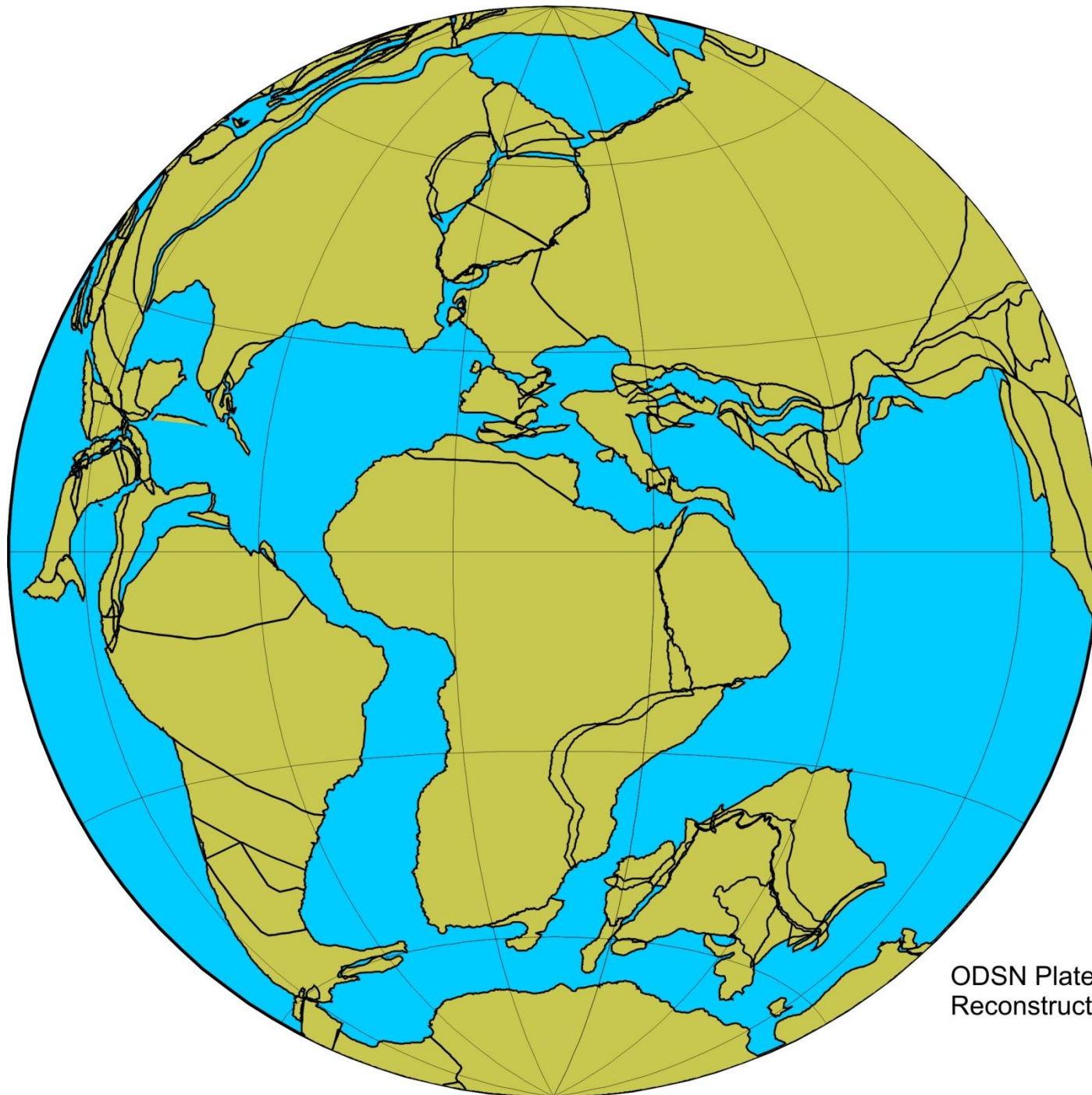


Scotese (2002)



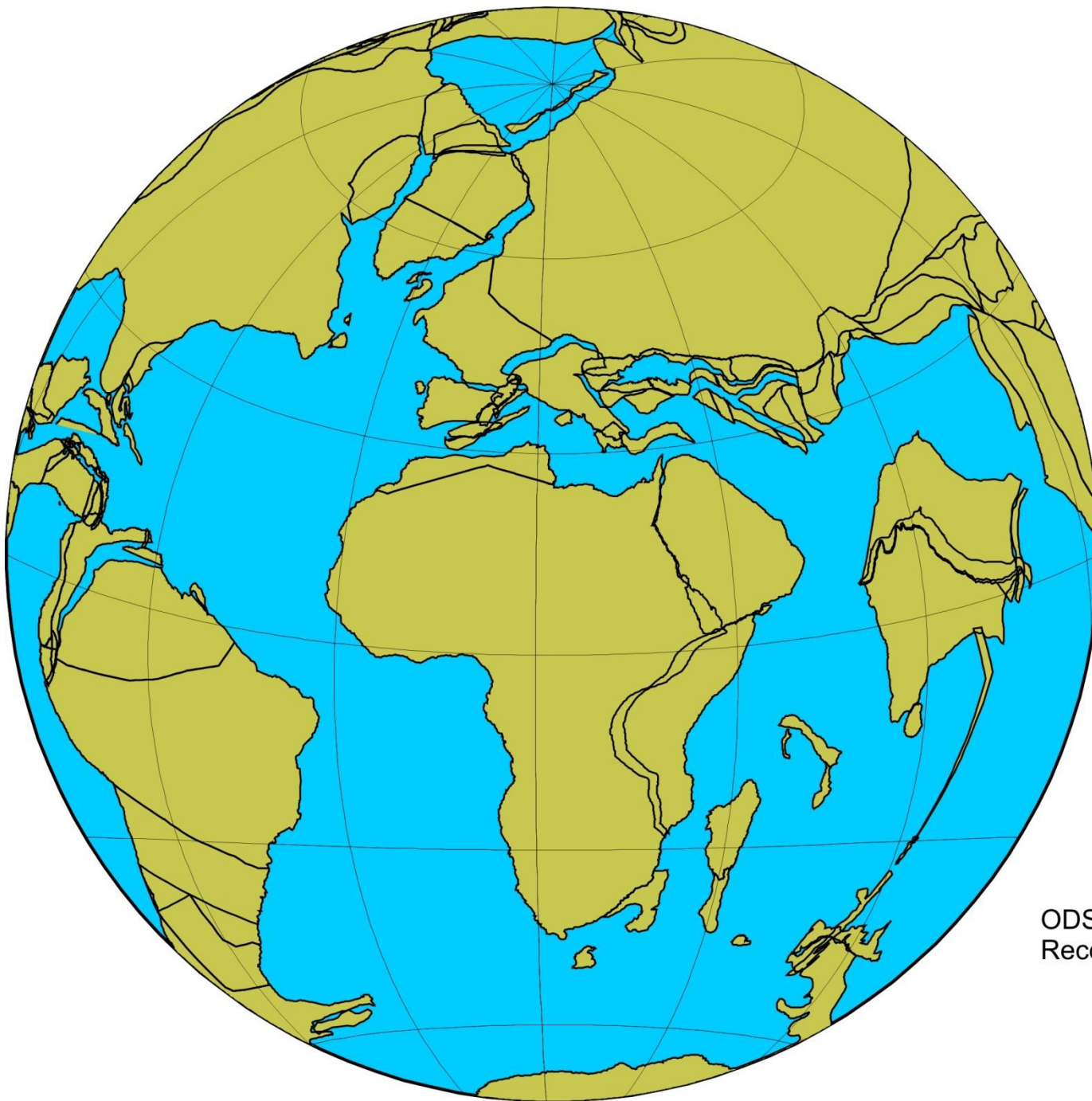
150 Ma
Latest Jurassic

ODSN Plate Tectonic
Reconstruction Service



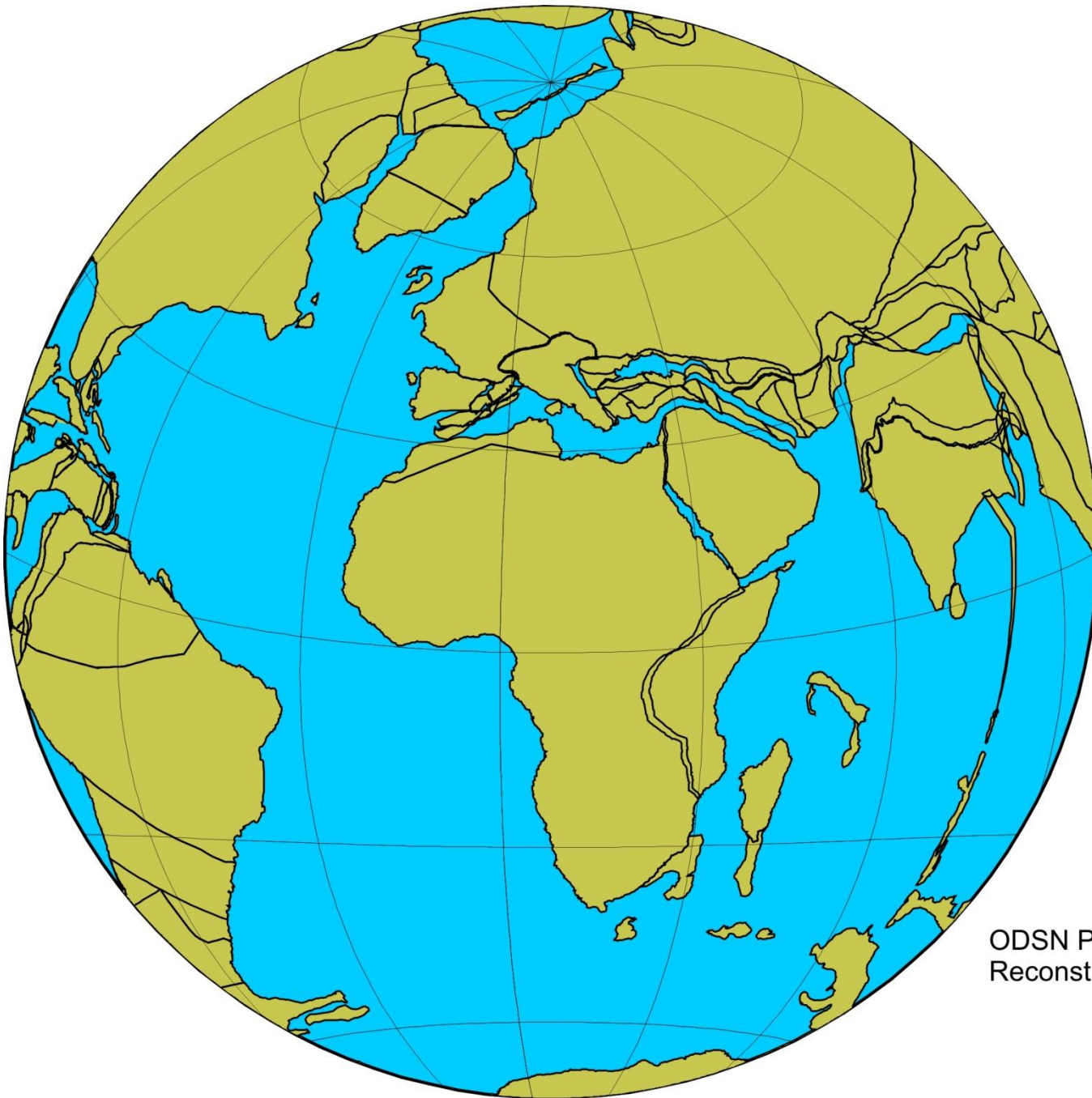
**100 Ma
Early Cretaceous
(Albian)**

ODSN Plate Tectonic
Reconstruction Service



50 Ma
Eocene

ODSN Plate Tectonic
Reconstruction Service



25 Ma
Oligocene

ODSN Plate Tectonic
Reconstruction Service

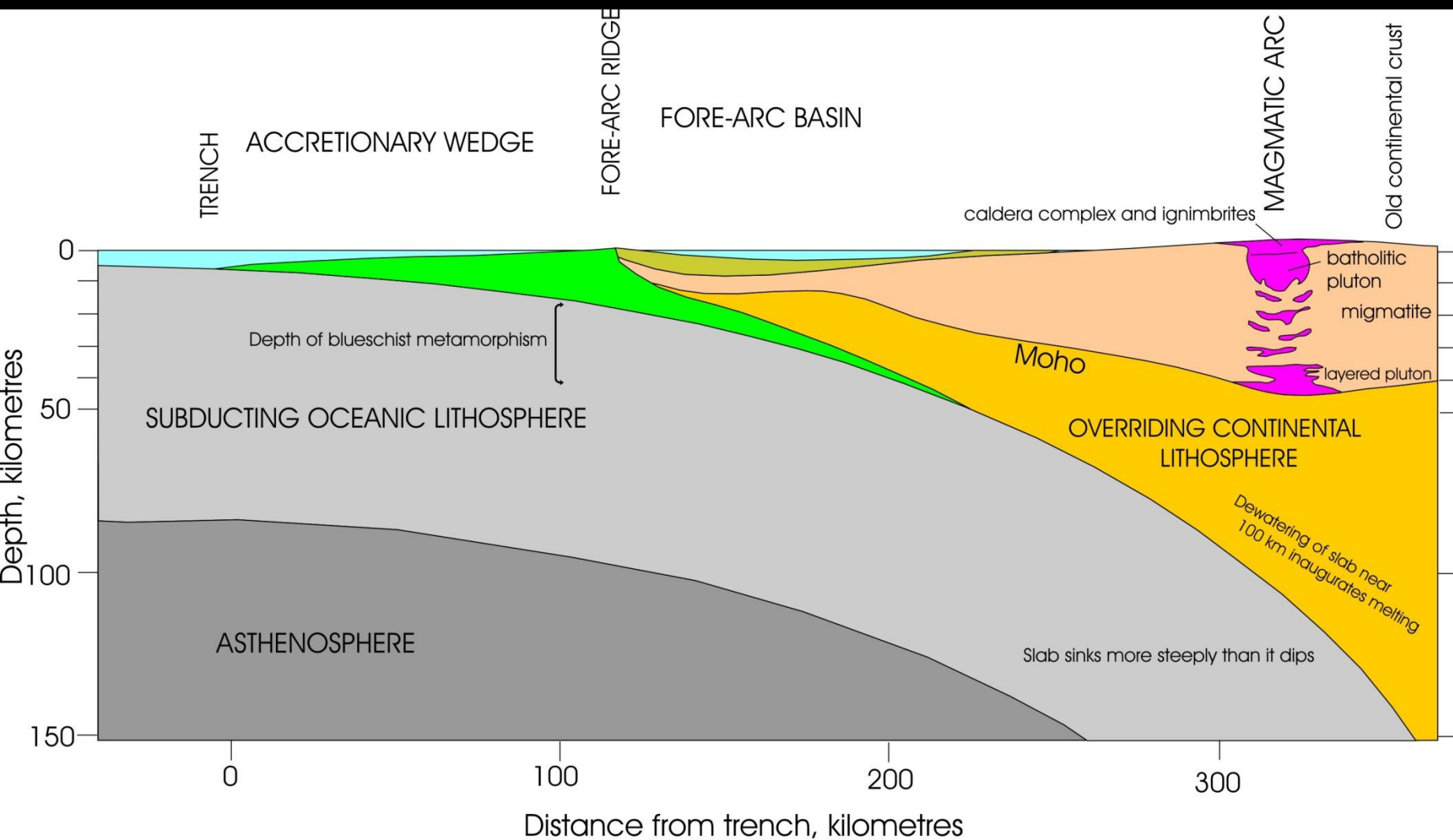
Anadolu son 400 milyon senede bir araya gelmiş okyanusal ve kıtasal parçalardan oluşmuştur.

Anadolu son 400 milyon senede bir araya gelmiş okyanusal ve kıtasal parçalardan oluşmuştur.

Anadolu'yu oluşturan bu kıtasal parçalar daha önce beraber değildiler.

Anadolu son 400 milyon senede bir araya gelmiş okyanusal ve kıtasal parçalardan oluşmuştur.

Bununla ilgili olarak eklenir prizma, melanj, ofiyolit, mavişist, fliş ve magmatik yaylar Anadolu'da en yaygın kaya birimleri arasındadır.



Section across a continental-margin subduction zone (Hamilton, 1988)



Early Paleozoic

Pontidler burada mıydı???

TO-TETHYS OCEAN

passive margin

ANATOLIDE-TAURIDE BLOCK

Border Folds

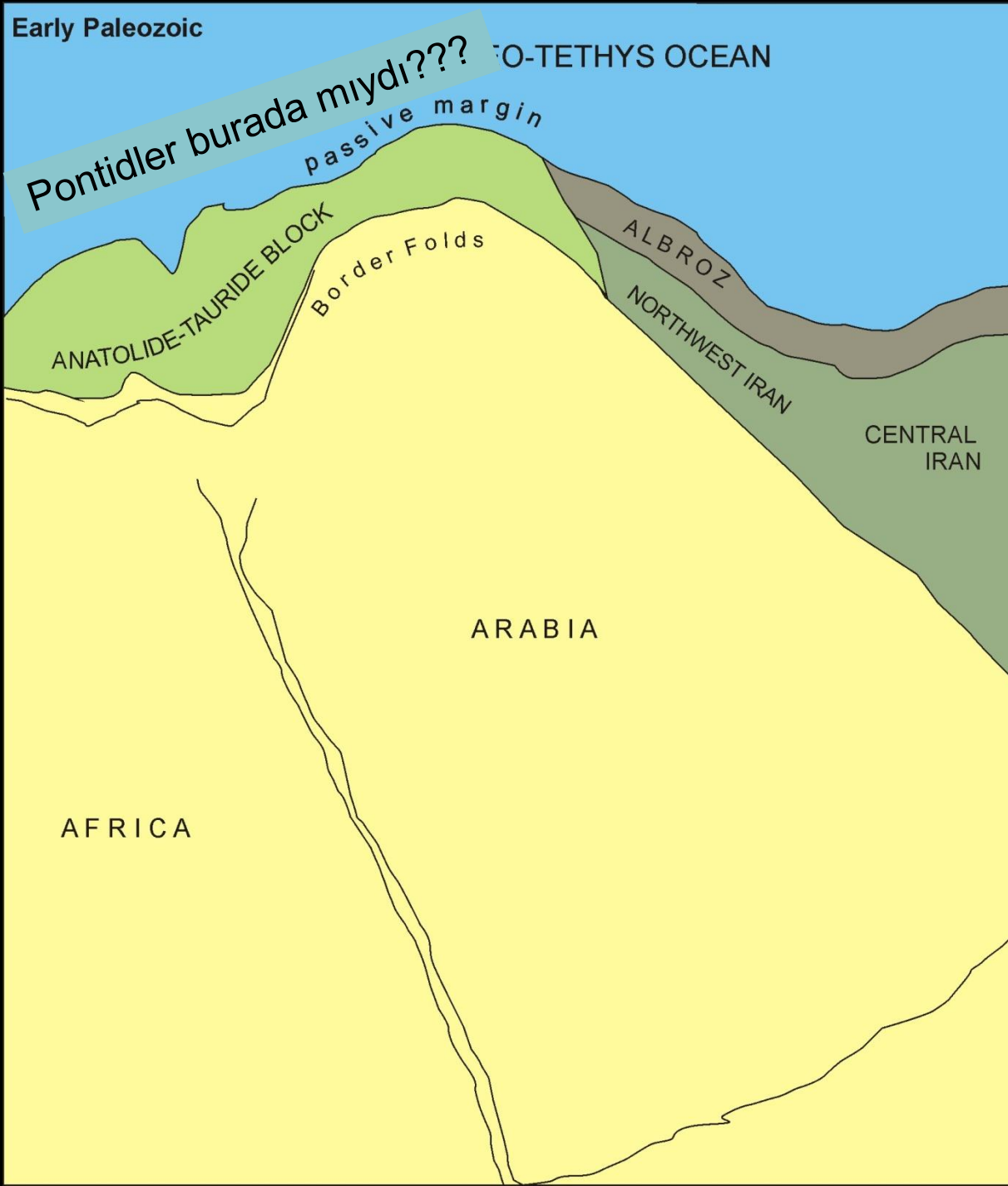
ALBROZ

NORTHWEST IRAN

CENTRAL
IRAN

ARABIA

AFRICA



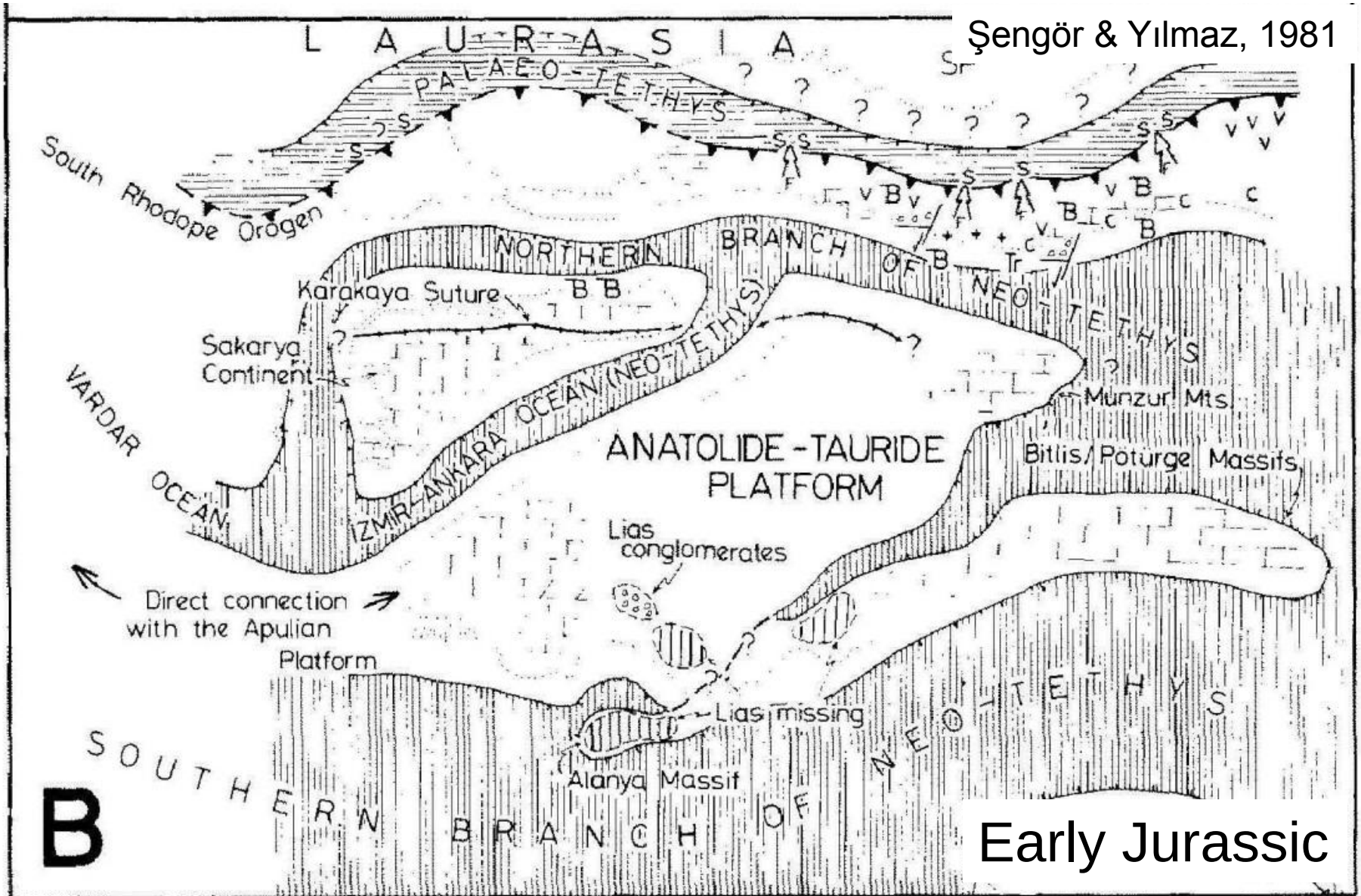
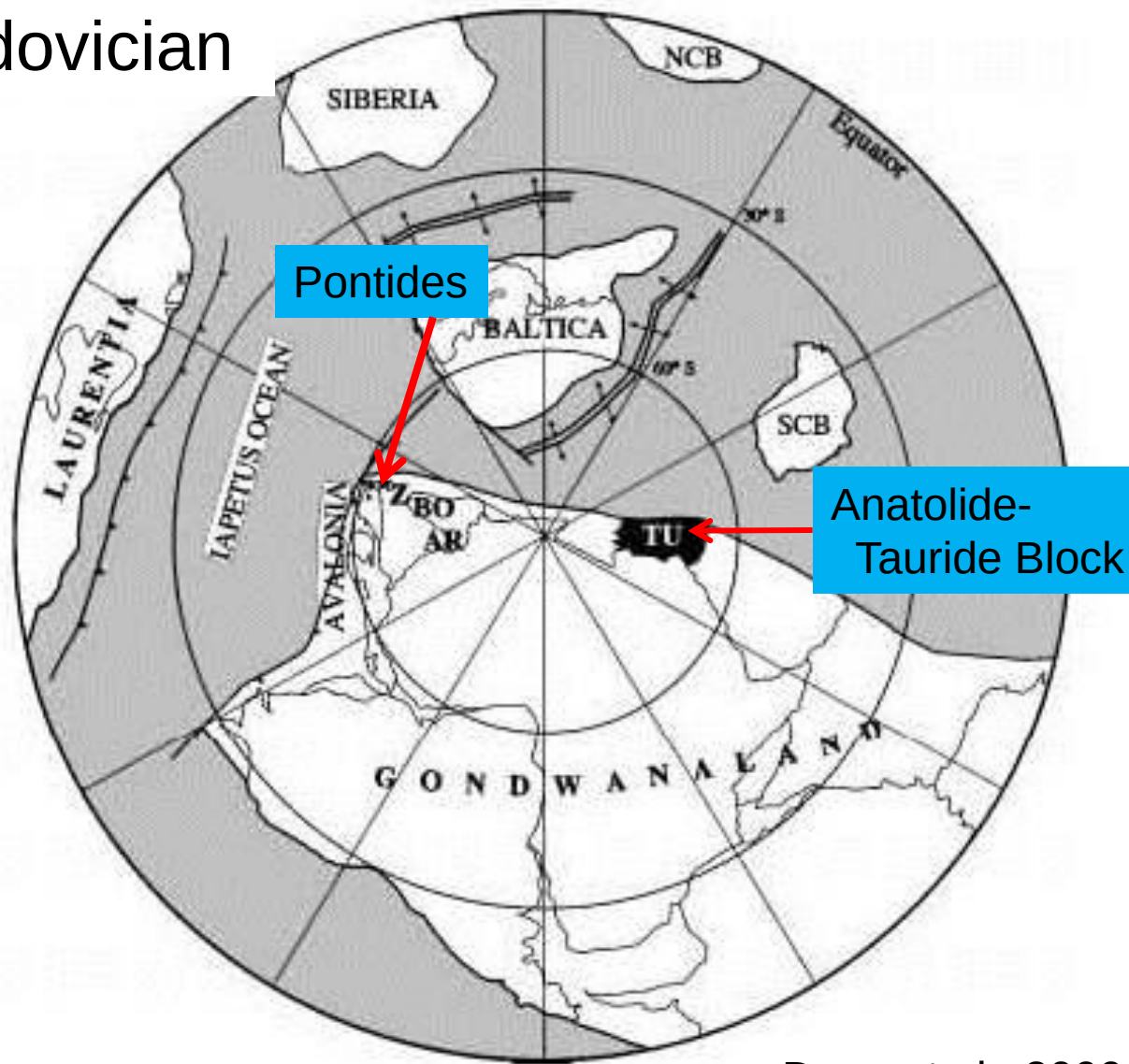


Fig. 6A. Palaeotectonic map of the Permo-Triassic. B. Palaeotectonic map of the early Jurassic.

Ordovician



Dean et al., 2000

Figure 9. South polar view of palaeogeographic reconstruction showing postulated position of continental blocks and the Zirze unit during the early Ordovician, modified from



As a consequence of the position of
Anatolia close to active continental
margins

ophiolite, blueschist-eclogite, melange,
flysch and magmatic arc rocks
are among the common rock
associations.

A natural laboratory to study subduction
processes