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Paleotectonic Reconstruction of the Central Tethyan Realm. Tectonono-Sedimentary-Palinspastic maps from Late Permian to Pliocene

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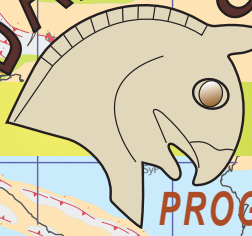
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DARIUS



PROGRAMME

PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

Atlas of 20 maps

BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

2018

*Tectono-Sedimentary-Palinspastic maps
from Late Permian to Pliocene*



PETROBRAS
CARIGALI



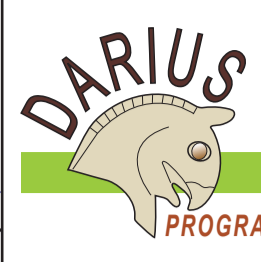
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PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

LOPINGIAN (259.1 - 251.9 Ma)

Map 1

Authors: **BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.**

Contributors: ANGIOLINI L., KAVEH F., PLUNDER A., POISSON A., POURTEAU A., ROBERTSON A., SHEKAWAT R., SOSSON M., ZANCHI A.

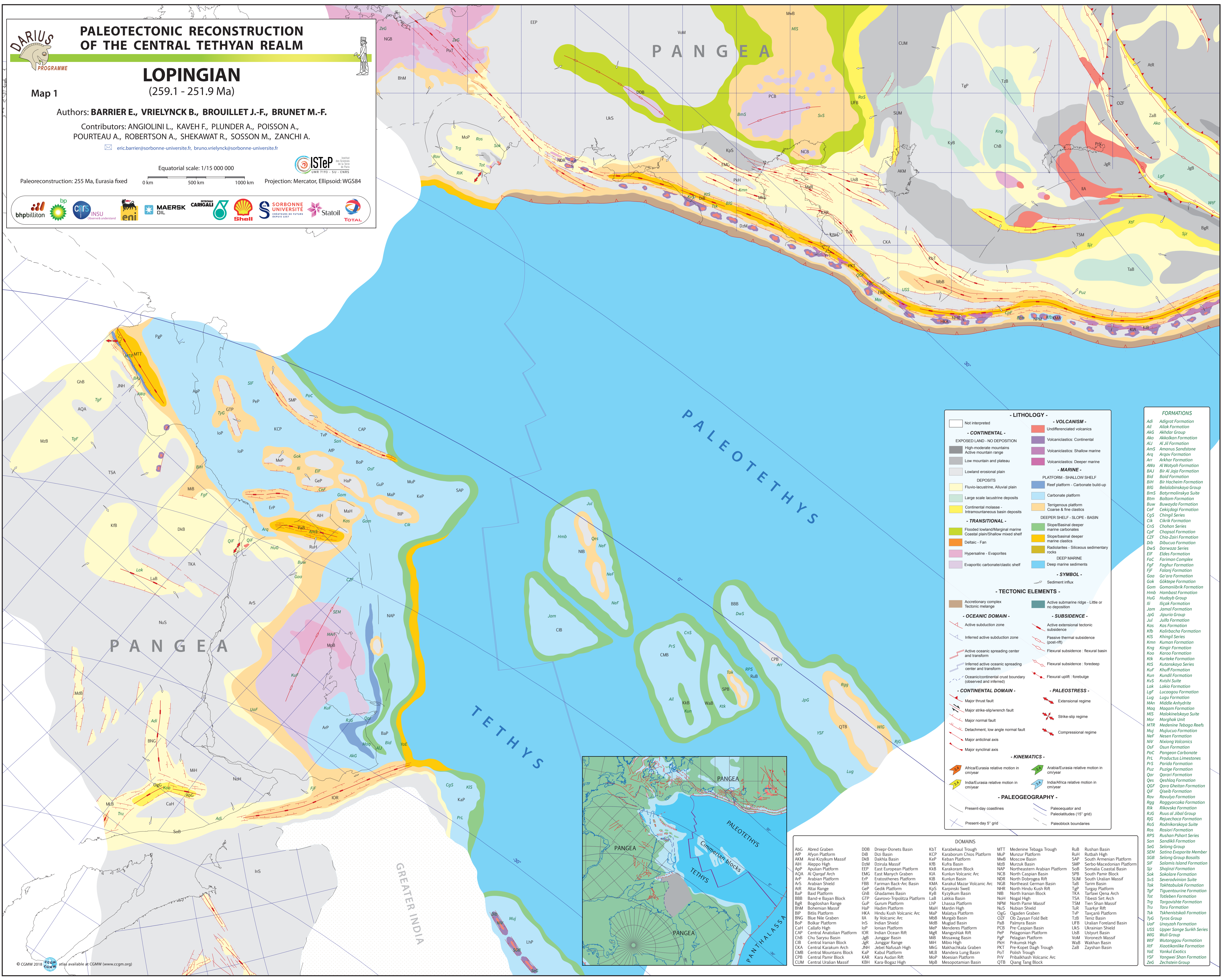
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Equatorial scale: 1/15 000 000

0 km 500 km 1000 km

Projection: Mercator, Ellipsoid: WGS84



- LITHOLOGY -

- CONTINENTAL -**
 - Exposed land - no deposition
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
 - DEPOSITS
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Intramontane basin deposits
 - Continental molasse
 - Fluvio-lacustrine, Alluvial plain
- MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Terrigenous platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/Basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radiolites - Siliceous sedimentary rocks
 - DEEP MARINE
 - Deep marine sediments
- TRANSITIONAL -**
 - Flooded lowland/Marginal marine
 - Coastal plain/Shallow mixed shelf
 - Deltaic - Fan
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
- VOLCANISM -**
 - Undifferentiated volcanics
 - Volcaniclastics: Continental
 - Volcaniclastics: Shallow marine
 - Volcaniclastics: Deeper marine
- SYMBOL -**
 - Sediment influx

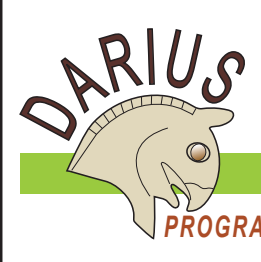
- TECTONIC ELEMENTS -

- OCEANIC DOMAIN -**
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (inferred and inferred)
- SUBSIDENCE -**
 - Active extensional tectonic subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
 - Flexural uplift: forebulge
- PALEOSTRESS -**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
- CONTINENTAL DOMAIN -**
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major antinormal axis
 - Major syndinal axis
- KINEMATICS -**
 - Africa/Eurasia relative motion in cm/year
 - India/Eurasia relative motion in cm/year
 - Arabia/Eurasia relative motion in cm/year
 - India/Africa relative motion in cm/year
- PALEOGEOGRAPHY -**
 - Present-day coastlines
 - Paleoequator and Paleolatitudes (15° grid)
 - Paleoblock boundaries

FORMATIONS

- Adi Adiragat Formation
- Ail Ailak Formation
- AKG Akhdar Group
- Ako Akkolkan Formation
- AlJ Al Jil Formation
- AmS Amanus Sandstone
- Arq Arqay Formation
- Arr Arkhar Formation
- Awa Al Walyah Formation
- BAJ Bir Al Jaga Formation
- BilB Baid Formation
- BirH Bir Hachem Formation
- BIG Belalabinskaya Group
- BmS Batymalinskaya Suite
- Btm Baltam Formation
- BwB Buwayda Formation
- CeF Cekiçdagı Formation
- CgS Chingil Series
- Cik Cikrik Formation
- ChnS Chohan Series
- CyF Chopal Formation
- CZF Chio-Zairi Formation
- Dib Dibucuo Formation
- DwS Darwaza Series
- EIF Eides Formation
- FaC Farman Complex
- FgF Faghur Formation
- FJF Falang Formation
- GoV Go'oro Formation
- Gok Göktepe Formation
- Gom Gomanibrik Formation
- Hmb Hambast Formation
- HuG Hudayb Group
- IlJ Iljak Formation
- Jam Jamal Formation
- JpG Jipuria Group
- Jul Julia Formation
- Kos Kos Formation
- Kib Kalirbacha Formation
- KIS Khingil Series
- Kmn Kuman Formation
- Kng Khingil Formation
- KOO Karoo Formation
- KkK Kureke Formation
- KtS Kutanskaya Series
- KuF Khuff Formation
- Kun Kunduli Formation
- KvS Kvishi Suite
- Lak Laka Formation
- LgF Lucacogu Formation
- Lug Luga Formation
- Mn Middle Anhydrite
- MaQ Maqom Formation
- MIS Malakinskaya Suite
- Mor Marghok Unit
- MTR Medenine Tebago Reefs
- Muj Mujjuvca Formation
- NesN Nesen Formation
- NiV Nixiang Volcanics
- Osu Osun Formation
- PaC Pangeon Carbonate
- PrL Productus Limestones
- PrS Parida Formation
- Puz Puze Formation
- QarQ Qarari Formation
- Qes Qeshlaq Formation
- QGF Qara Gheitan Formation
- Qif Qiseib Formation
- Rav Ravulva Formation
- Rag Ragyorovca Formation
- Rik Rikovska Formation
- RJG Ruis al Jibal Group
- RJC Rajjehocha Formation
- RdR Rodnikarskaya Suite
- Ros Rosiori Formation
- RshR Rushman Pshart Series
- RPS Sandikil Formation
- SeG Selong Group
- SEM Satina Evaporite Member
- SeL Selong Group Basalts
- SIF Solamis Island Formation
- ShjS Shajiqi Formation
- SoB South Pamir Block
- Sok Sokolore Formation
- SvS Severodvianian Suite
- Tak Takhtabulak Formation
- TpZ Tigranovskaya Formation
- Tot Toltelven Formation
- Tg Targovishte Formation
- Tu Taru Formation
- Tsk Tskhentsiskali Formation
- TyS Tyras Group
- UoF Uppar Sange Surkh Series
- USS Upper Sange Surkh Series
- Uls Ulstyur Basin
- Uf Urulan Forland Basin
- Vm Voronezh Massif
- Wf Wakhan Basin
- ZaB Zayshan Basin
- Zg Zechstein Group

DOMAINS	
AbG Abred Graben	DOB Dniepr-Donets Basin
AP Aiyon Platform	Dib Diaz Basin
AKM Aral-Kizylkum Massif	Dkb Dakhla Basin
AH Aleppo High	DZM Dzirula Massif
AP Apulian Platform	Eep East European Platform
AQA Al Qarqaf Arch	EMG East Manych Graben
ArP Arabian Platform	ErP Eratosthenes Platform
AS Arabian Shield	FBB Farman Back-Arc Basin
AR Altai Range	GeP Gezik Platform
BaP Baid Platform	GhB Ghadames Basin
BaB Band-e Bayan Block	GTP Gavrovo-Tripolizza Platform
BgP Bogdoshan Range	Gup Gurum Platform
Bm Bohemian Massif	HuP Hadim Platform
BIP Bilis Platform	HKA Hindu Kush Volcanic Arc
BNG Blue Nile Graben	IA Ily Volcanic Arc
BoP Bolkar Platform	IA Indian Shield
CaH Callalo High	IOR Indian Ocean Rift
CAP Central Anatolian Platform	JgB Junggar Basin
ChB Chu Sarysu Basin	JgR Junggar Range
CIB Central Iranian Block	JNH Jebel Nafusah High
CKA Central Karakum Arch	KAP Kabud Platform
CMB Central Mountains Block	KAR Kara Audan Rift
CPB Central Pamir Block	Kar Kara-Bogaz High
CUM Central Uralian Massif	KBH Kara-Bogaz High
KBT Karabekul Trough	MuP Murzur Platform
KCP Karakorum Chop Platform	MwB Moscow Basin
KeP Keban Platform	KbB Karakoram Block
KIB Kunlun Volcanic Arc	KIA Kunlun Volcanic Arc
KIB Kunlun Basin	KIB Kunlun Basin
KMA Karakul Mazar Volcanic Arc	KMA Karakul Mazar Volcanic Arc
KNS Karapinsk Swell	KNS Karapinsk Swell
KyB Kyzylkum Basin	KyB Kyzylkum Basin
LAB Lakka Basin	LAB Lakka Basin
LIP Lhasa Platform	LIP Lhasa Platform
Mah Mardin High	Mah Mardin High
MaP Malaya Platform	MaP Malaya Platform
MbB Margah Basin	MbB Margah Basin
MbS Muglad Basin	MbS Muglad Basin
MeP Menderees Platform	MeP Menderees Platform
MgR Mangyshlak Rift	MgR Mangyshlak Rift
MIB Missawag Basin	MIB Missawag Basin
MH Mbio High	MH Mbio High
MK Malakhchala Graben	MK Malakhchala Graben
MLS Mandera Lung Basin	MLS Mandera Lung Basin
MoP Moesian Platform	MoP Moesian Platform
MpB Mesopotamian Basin	MpB Mesopotamian Basin
MTT Medenine Tebago Trough	MTT Medenine Tebago Trough
MuP Marzur Platform	MuP Marzur Platform
MwB Moscow Basin	MwB Moscow Basin
MBB North Arabian Basin	MBB North Arabian Basin
NBP North Pamir Block	NBP North Pamir Block
NDR North Dobrogea Rift	NDR North Dobrogea Rift
NGB Northeast German Basin	NGB Northeast German Basin
NHR North Hindu Kush Rift	NHR North Hindu Kush Rift
NIB North Iranian Block	NIB North Iranian Block
NoH Nogal High	NoH Nogal High
NPM North Pamir Massif	NPM North Pamir Massif
NuS Nubian Shield	NuS Nubian Shield
OGG Ogaden Graben	OGG Ogaden Graben
OZ Ob Zaysan Fold Belt	OZ Ob Zaysan Fold Belt
PAB Palmyra Basin	PAB Palmyra Basin
PCB Pre-Caspian Basin	PCB Pre-Caspian Basin
PeP Pelagorian Platform	PeP Pelagorian Platform
PgP Pelagian Platform	PgP Pelagian Platform
PkH Prikumsk High	PkH Prikumsk High
PKT Pre-Kapet Dagh Trough	PKT Pre-Kapet Dagh Trough
PoT Polish Trough	PoT Polish Trough
PrV Pribalkhash Volcanic Arc	PrV Pribalkhash Volcanic Arc
QTB Qiang Tang Block	QTB Qiang Tang Block
RuB Ruzhan Basin	RuB Ruzhan Basin
RuH Rutbah High	RuH Rutbah High
SAP South Armenian Platform	SAP South Armenian Platform
SMP Serbo-Macedonian Platform	SMP Serbo-Macedonian Platform
SoB Somalia Coastal Basin	SoB Somalia Coastal Basin
SPB South Pamir Block	SPB South Pamir Block
SUM South Uralian Massif	SUM South Uralian Massif
TaB Tarm Basin	TaB Tarm Basin
TgF Targovishte Formation	TgF Targovishte Formation
TKA Tarfaw Qena Arch	TKA Tarfaw Qena Arch
TSA Tibesti Sirt Arch	TSA Tibesti Sirt Arch
TSM Tien Shan Massif	TSM Tien Shan Massif
TuR Turary Rift	TuR Turary Rift
TvP Tavcani Platform	TvP Tavcani Platform
TyS Tyras Group	TyS Tyras Group
Uf Urulan Forland Basin	Uf Urulan Forland Basin
USS Upper Sange Surkh Series	USS Upper Sange Surkh Series
Uls Ulstyur Basin	Uls Ulstyur Basin
Vm Voronezh Massif	Vm Voronezh Massif
Wf Wakhan Basin	Wf Wakhan Basin
ZaB Zayshan Basin	ZaB Zayshan Basin



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

ANISIAN (247.2 - 242 Ma)

Map 2

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

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Equatorial scale: 1/15 000 000

Paleoreconstruction: 244 Ma, Eurasia fixed 0 km 500 km 1000 km Projection: Mercator, Ellipsoid: WGS84



- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
- MARINE -**
 - DEPOSITS
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Continental molasse
 - Intramontaneous basin deposits
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Terrigenous platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radialites - Siliceous sedimentary rocks
 - DEEP MARINE
 - Deep marine sediments
- SYMBOL -**
 - Sediment influx
- TECTONIC ELEMENTS -**
 - Accretionary complex and transform
 - Active submarine ridge - Little or no deposition
 - OCEANIC DOMAIN -**
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (observed and inferred)
 - SUBSIDENCE -**
 - Active extensional tectonic subsidence
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
 - Flexural uplift: forebulge
 - CONTINENTAL DOMAIN -**
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major syndinal axis
 - PALEOESS -**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
 - KINEMATICS -**
 - Africa/Eurasia relative motion in cm/year
 - Arabia/Eurasia relative motion in cm/year
 - India/Eurasia relative motion in cm/year
 - PALEOGEOGRAPHY -**
 - Present-day coastlines
 - Paleoequator and paleolatitudes (15° grid)
 - Paleoblock boundaries

FORMATIONS

AcS Acheshbok Suite	DoS Danguzskaya Suite	Kii Kiiskaya Suite	PiF Pitovo Formation
Adi Adigrat Formation	DuU Denizipinarı Unit	Kiz Kizilay Formation	QIF Qiseb Formation
AEP Aif El Naqa Formation	EgG Eghel Group	KHF Kharek-Kat Formation	Rso Roof Formation
Agf Agfahid Formation	EhF Ehuabulake Formation	Kla Kalamay Formation	RCS Red Coloured Sandstone
Ail Ailak Formation	Eik Eika Formation	Kim Kalamkas Formation	Rus Ruis of Jibal Group
Ajo Ajar Formation	Epi Epidaurus Formation	KIS Khingil Series	Rng Rangkul Series
AKG Akhdar Group	EwA El Wadih Formation	Kid Karadeh Formation	RPS Ruslan Pshart Series
AKZ Akzhalan Formation	FaF Fafani Formation	Kim Karamey Formation	Son Sandikli Formation
AlJ Al Jil Formation	Fla Flambouri Formation	Kkr Kurrush Formation	SGF Songpan Ganzi Flysch
Alm Alam Formation	Gaa Go'ara Formation	KuD Kurachine Dolomite	SIF Sina Formation
ARA Abu Ras Formation	Gkh Gell Khano Formation	Lok Lokia Formation	SlK Sikhari Formation
ARF Arax Formation	Gm Grameni Formation	LoF Lozen Formation	Sin Simi Formation
AyS Arystan Series	Gui Guailialah Formation	Maq Magam Formation	Sto Shotori Formation
Bab Babina Formation	Gva Gvadarashi Formation	MHF Mahil Formation	Sud Sudair Formation
Bom Borom Formation	HcF Hairech Formation	MIF Mislah Formation	Tas Tarasa Formation
Bud Budra Formation	His Hishan Formation	MIM Milas Marble	TCS Tchoygyi Series
CgS Chingil Series	Hug Huglu Formation	Mit Mitrova Formation	Tut Tutu Formation
Cnf Canakli Formation	Ins Inderiskaya Suite	MKF Maria Kanu Formation	TyG Tyros Group
CqG Chopuqu Group	Jif Jilh Formation	MIG Mulusso Group	TyS Tsaryskaya Suite
LuG Cudi Group	JuC June Complex	MuF Mukheris Formation	TZS Tiznowa Series
Daf Dastak Formation	KoG Karatash Group	MuG Muschelkalk Group	WDF Wodf Darilikh Formation
DsS Doab Series	Kay Kayabasi Formation	NF Nicullet Formation	XoG Xiaoquanguo Group
Deb Derebucak Formation	Kdu Karuduuan Formation	OCF Ouled Chebbi Formation	YqG Yingshiquanguo Group
Dib Dipipora Beds	KeG Kercem Group	OF Obetin Formation	ZHS Zhilindan Series
Dob Dobrudzha Formation	Kel Kelamayi Formation	PAC Pangaeon Carbonate	ZF Zorzantine Formation
Dol Doreints Formation	Kgn Kangnan Formation	PgG Petrohan Group	

DOMAINS

AAA Al Awaysat Arch	BKR Balkan Rift	DOB Dniepr-Donets Basin	IoP Ionian Platform	KMA Karakul Mazar Volcanic Arc	MHH Mblio High	NuS Nubian Shield	SaP Saharan Platform	TSM Tien Shan Massif
ABG Abred Graben	BIP Bitlis Platform	DIB Dizi Basin	IOR Indian Ocean Rift	KoB Koçali Basin	MMP Mislah Platform	OgG Ogaden Graben	SaB Sirt Basin	TuR Tuarkyr Rift
AdP Andini Platform	BMG Blue Nile Graben	DDB Dakhla Basin	IsB Istabul Block	KpS Karpinska Swell	MK Makhachkala Graben	PaB Palmyra Basin	SJB Stranjda Block	TuM Tavcanli Margin
APF Afyon Platform	BoP Bolkar Platform	DZM Dzirula Massif	Junggar Ocean Rift	KqB Kuqa Basin	MLB Mandera Lung Basin	Pre-Caspian Basin	SKB Sakarya Block	UKS Ukrainian Shield
AIB Alania Basin	Btg Berit Graben	EOP East European Platform	JgB Junggar Basin	KtB Kuznetsk Basin	MbP Moesian Platform	Polandeskii Ridge	SMP Serbo-Macedonian Platform	UIP Ulitau Plateau
AP Aleppo Plateau	CaH Callia High	EMC East Manyeh Graben	KaP Kabali Platform	KuB Kire Basin	MbB Mesopotamian Basin	PeP Pelagonian Platform	SoB Somalia Coastal Basin	USB Ustyurt Basin
AP Apulian Platform	CAP Central Anatolian Platform	EFP East Fergana Graben	KAR Kara Audan Rift	LaB Lakkia Basin	Mur Murzur Platform	PeF Pelagonian Platform	SoF South Famer Block	VNM Voronezh Massif
AQA Al Qaraq Arch	CHR Chingiz Range	FBB Farman Back-Arc Basin	KBH Kara-Bogaz High	LhP Lhassa Platform	MzB Murzuk Basin	Pib Pleshhet Basin	SUM South Uralian Massif	WaB Wakhan Basin
AP Arabian Platform	CIB Central Iranian Block	GeP Gedik Platform	KBT Karabekuli Trough	LbL Lycian Basin	NAP Northeastern Arabian Platform	PMB Pamir Basin	SVA Stavropol Arch	Wab Wakhan Basin
AS Arabian Shield	CMB Central Mountains Block	GhB Ghadames Basin	KCP Karabonum Chevo Platform	MhH Marcin High	NCB North Caspian Basin	PMB Pamir Basin	POB Pindos-Olonos Basin	SyP Scythian Platform
AT Antalya Basin	CPB Central Pamir Block	GTP Gavovo-Tropolzta Platform	KEP Keban Platform	MAP Malaya Platform	NRB North Dobrogea Rift	POB Pamir Basin	NRB North Dobrogea Rift	TaB Tarn Basin
AIR Alta Range	CTS Chott Basin	GUP Gurum Platform	KIB Kufra Basin	MbB Murgab Basin	NRG Northeast German Basin	QTB Qiang Tang Block	NRG Northeast German Basin	TaH Tatarian High
BBB Band-e-Bayun Block	CTS Central Tien Shan	HsB Hawasina Basin	HaB Hadim Platform	MbM Malak Margn	NHB North Hindu Kush Rift	RhB Rhodope Block	NHB North Hindu Kush Rift	TgB Turgay Basin
BDP Bey Daglari Platform	CLM Central Uralian Massif	HpP Hadim Platform	KAB Karakoram Block	MbM Malak Margn	NIB North Iranian Block	RuB Ruzhan Basin	NIB North Iranian Block	TKA Tarfaya Qena Arch
AIR Alta Range	CVA Cangalidag Volcanic Arc	HKA Hindu Kush Volcanic Arc	KIA Kunlun Volcanic Arc	MeP Menderes Platform	NoH Nogal High	RuB Ruzhan Basin	MeP Menderes Platform	TKR Tom Kolyvan Range
Bgr Bogdoshan Range	Cya Cyrenaica Arch	IHS Indian Shield	KIB Kunlun Basin	MGR Mangyshlak Rift	NPM North Pamir Massif	RuB Ruzhan Basin	MGR Mangyshlak Rift	TSA Tibesti Sirt Arch
BIM Bohemian Massif						SAP South Armenian Platform	TSA Tibesti Sirt Arch	



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

LATE NORIAN (216 - 208.5 Ma)

Map 3

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

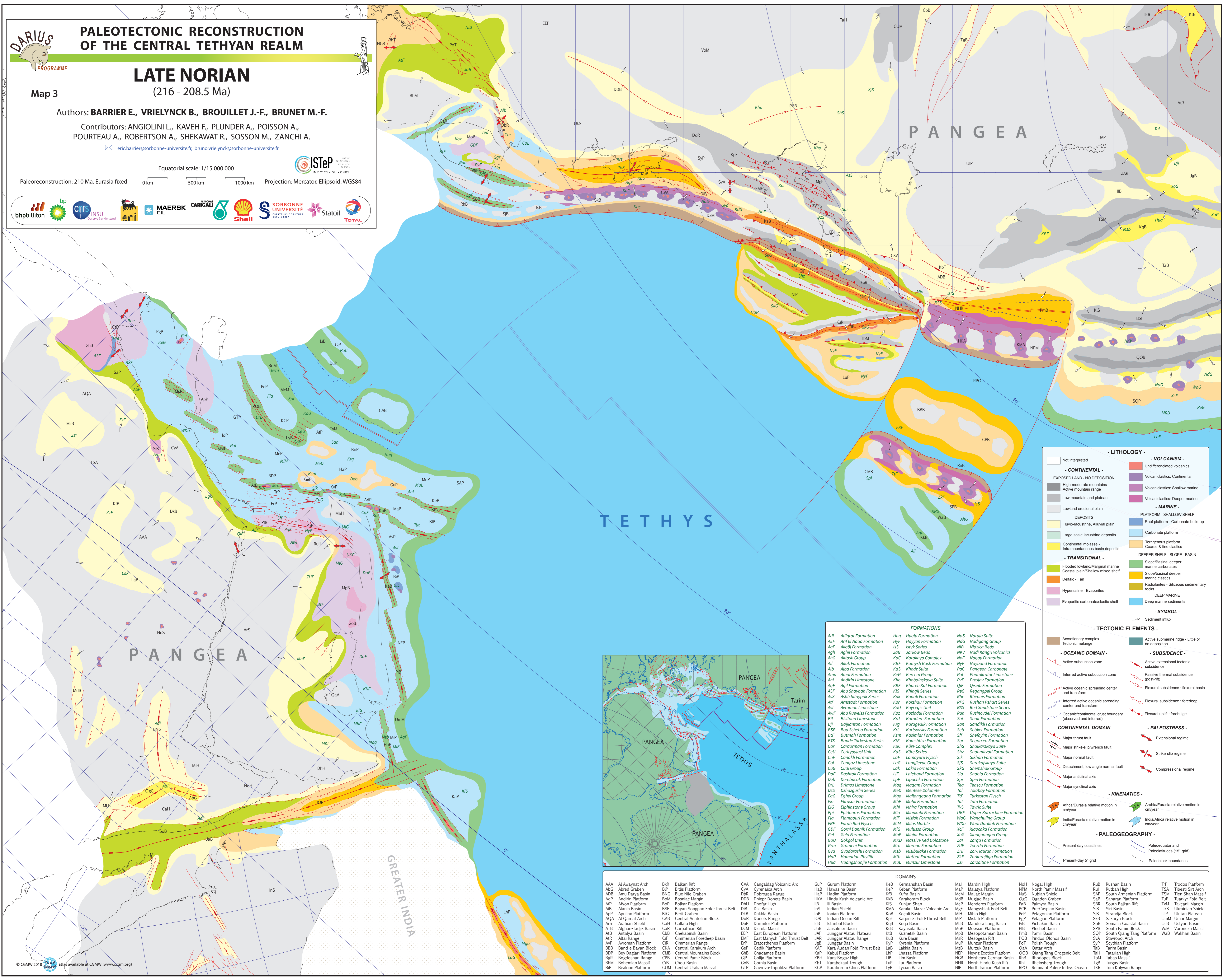
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Equatorial scale: 1/15 000 000

Paleoreconstruction: 210 Ma, Eurasia fixed 0 km 500 km 1000 km Projection: Mercator, Ellipsoid: WGS84



FORMATIONS			
Adi	Adigrat Formation	Hug	Huglu Formation
AEF	Ari El Naga Formation	Hyf	Hoyyan Formation
Agf	Aghil Formation	Isy	Islyk Series
AgH	Aghil Formation	Job	Jarkow Beds
AGH	Akash Group	KaC	Karakaya Complex
Al	Allok Formation	KBF	Kanysh Bash Formation
Alb	Alba Formation	KGS	Khada Suite
Ama	Amal Formation	KeG	Kercem Group
AnL	Andrin Limestone	Kho	Khobinskaya Suite
AqF	Aqil Formation	KKF	Khareh Kat Formation
AsS	Ashtchaypak Series	KIS	Khingil Series
ASF	Abu Shaybah Formation	KNF	Komshiz Formation
AIF	Arnstadt Formation	Kor	Korzhou Formation
AvL	Avoman Limestone	KoU	Koycegiz Unit
BIL	Biloun Limestone	Kid	Karadere Formation
Bj	Bajiantan Formation	Kir	Kurtsovskiy Formation
BSF	Boa Schebo Formation	Ksm	Kosimlar Formation
Bif	Burmah Formation	KTF	Komshiz Formation
BTS	Bande Turkistan Series	KuC	Kure Complex
Car	Carraoman Formation	KuS	Kure Series
CeU	Cerityayasi Unit	Lak	Lakia Formation
CnF	Canakli Formation	Lif	Laleband Formation
CoL	Congaz Limestone	LoG	Langixue Group
CuG	Cudi Group	Lok	Lok Formation
DaF	Dashok Formation	LpF	Lipchka Formation
Deb	Derebucak Formation	MaG	Maqom Formation
DIL	Drinos Limestone	Mia	Mia Formation
DZS	Dzhazgulin Series	Mnt	Mentese Dolomite
EGG	Eghei Group	Mga	Mallongang Formation
Ekr	Ekrasar Formation	MhF	Mahli Formation
EIG	Elphinstone Group	Mhi	Mhira Formation
Epi	Epidaurus Formation	Mia	Miankuhi Formation
FiB	Fibrosi Formation	MIF	Mif Formation
FRF	Farah Rud Flysch	MIM	Milas Marble
GDF	Gornj Dannik Formation	MIG	Mulussa Group
Gel	Gela Formation	MInj	Minjur Formation
GoU	Golagil Unit	Mrd	Massive Red Dolostone
Gm	Gromani Formation	Mrn	Marona Formation
Gva	Gvadarashi Formation	Msb	Misbulake Formation
Hap	Hamadan Phyllite	Mib	Matbat Formation
Hua	Huangshanjie Formation	MUL	Munzur Limestone
NaS	Narulu Suite	NaG	Nadigang Group
NIB	Nidzica Beds	NKV	Nadi Kangri Volcanics
NoF	Nogay Formation	NyF	Noyband Formation
PaC	Pangoen Carbonate	PaC	Pangoen Carbonate
PuL	Pontokrator Limestone	Phe	Preshav Formation
PvF	Preshav Formation	Qif	Qiseib Formation
RGS	Regongpei Group	RgG	Regongpei Group
Rhe	Rheussis Formation	Rhe	Rheussis Formation
RPS	Rushan Pshart Series	RSS	Red Sandstone Series
RuN	Rusinovdel Formation	RuN	Rusinovdel Formation
Sai	Shai Formation	Sai	Shai Formation
San	Sandikli Formation	Seb	Sebker Formation
Sif	Sheloyim Formation	Sif	Sheloyim Formation
Sgr	Segarceq Formation	Sgr	Segarceq Formation
SJS	Shokorskaya Suite	SJS	Shokorskaya Suite
Shz	Shahmirzad Formation	Shz	Shahmirzad Formation
Sik	Sikhari Formation	Sik	Sikhari Formation
SJS	Surakokyo Suite	SJS	Surakokyo Suite
ShG	Shemshak Group	ShG	Shemshak Group
Sla	Shablu Formation	Sla	Shablu Formation
Spi	Spin Formation	Spi	Spin Formation
Tea	Teasco Formation	Tea	Teasco Formation
Tol	Talobay Formation	Tol	Talobay Formation
Tif	Turkestan Flysch	Tif	Turkestan Flysch
TuF	Tutu Formation	TuF	Tutu Formation
TvS	Tovric Suite	TvS	Tovric Suite
Ukf	Upper Kurachine Formation	Ukf	Upper Kurachine Formation
Wag	Wangshuling Group	Wag	Wangshuling Group
Wdi	Wadi Dariliah Formation	Wdi	Wadi Dariliah Formation
XcF	Xiaocao Formation	XcF	Xiaocao Formation
XoG	Xiaoqiangou Group	XoG	Xiaoqiangou Group
ZfF	Zang Formation	ZfF	Zang Formation
Zif	Zvezda Formation	Zif	Zvezda Formation
ZHF	Zor-Hauran Formation	ZHF	Zor-Hauran Formation
ZKf	Zorkarajiga Formation	ZKf	Zorkarajiga Formation
ZZf	Zarzarine Formation	ZZf	Zarzarine Formation

- LITHOLOGY -

- Not interpreted
- EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland depositional plain
- CONTINENTAL
 - Continental molasse - Intramontane basin deposits
 - Flooded lowland/Marginal marine
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
- TRANSITIONAL
 - Continental molasse - Intramontane basin deposits
 - Flooded lowland/Marginal marine
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
- MARINE
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Terrigenous platform
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radiolarians - Siliceous sedimentary rock
 - DEEP MARINE
 - Deep marine sediments
- SYMBOL
 - Sediment influx

- VOLCANISM -

- Undifferentiated volcanics
- Volcanics: Continental
- Volcanics: Shallow marine
- Volcanics: Deeper marine

- TECTONIC ELEMENTS -

- Active submarine ridge - Little or no deposition
- Active extensional tectonic subsidence
- Passive thermal subsidence (post-rift)
- Flexural subsidence: flexural basin
- Flexural subsidence: foredeep
- Flexural uplift: forebulge

- OCEANIC DOMAIN -

- Active subduction zone
- Inferred active subduction zone
- Active oceanic spreading center and transform
- Inferred active oceanic spreading center and transform
- Oceanic/continental crust boundary (observed and inferred)

- CONTINENTAL DOMAIN -

- Major thrust fault
- Major strike-slip/wrench fault
- Major normal fault
- Detachment, low angle normal fault
- Major anticlinal axis
- Major synclinal axis

- PALEOSTRESS -

- Extensional regime
- Strike-slip regime
- Compressional regime

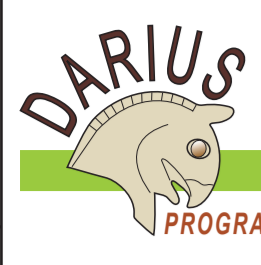
- KINEMATICS -

- Africa/Eurasia relative motion in myr/year
- India/Africa relative motion in myr/year
- Arabia/Eurasia relative motion in myr/year
- India/Africa relative motion in myr/year

- PALEOGEOGRAPHY -

- Present-day coastlines
- Paleoequator and Paleolatitudes (15° grid)
- Paleoblock boundaries

DOMAINS																	
AAA	Al Aynat Arch	BKR	Balkan Rift	CVA	Cangaladag Volcanic Arc	GUP	Garum Platform	KEB	Kermanshah Basin	MHH	Mardin High	NHG	Nogal High	RUB	Rushan Basin	TIP	Troodos Platform
AHC	Abred Graben	BIP	Bitlis Platform	CYA	Cyrenaica Arch	HAB	Hawassa Basin	HAB	Hawassa Basin	MHP	Malay Platform	NPM	North Pamir Massif	RUB	Rubbah High	TSa	Tibet S. Arch
ADB	Amu Darya Basin	BNG	Blue Nile Graben	DBR	Dobrogea Range	HAD	Hadin Platform	KIB	Kufra Basin	MCM	Maliac Margin	NUS	Nubian Shield	SAP	South Armenian Platform	TSM	Tien Shan Massif
ADP	Andrin Platform	BoM	Bosniac Margin	DDB	Donets-Donets Basin	HKA	Hindu Kush Volcanic Arc	KKB	Karakoram Block	MGB	Muglad Basin	OGG	Ogaden Graben	SAP	Saharan Platform	TUF	Turkayr Fold Belt
APF	Ayvon Platform	BoP	Boikar Platform	DH1	Dhofar High	IKR	Indian Ocean Rift	KIS	Kunlun Basin	MMP	Mendes Platform	SRB	South Balkan Rift	SIB	Sirt Basin	TAM	Tarçanlı Margin
Ala	Alania Basin	BSF	Bayan Sogpan Fold-Thrust Belt	DIB	Diz Basin	INS	Indian Shield	KMA	Karakul Mazar Volcanic Arc	MGF	Mangshak Fold Belt	PCB	Pre-Caspian Basin	SIB	Sirt Basin	UKS	Ukrainian Shield
ApP	Apulian Platform	CBG	Bent Graben	DKB	Dakila Basin	IOB	Ionian Platform	KoB	Koçali Basin	MIB	Mibio High	PEP	Pelagonian Platform	SJB	Sirandja Block	UIP	Ulutau Plateau
AQA	Al Qanaj Arch	CAB	Central Anatolian Block	DOR	Donets Range	IOR	Indian Ocean Rift	KPF	Karapinski Fold-Thrust Belt	MIP	Melaf Platform	PPB	Pamir Basin	SQB	South Qiang Tang Platform	UMM	Umar Margin
ArS	Arabian Shield	CaH	Callaio High	DUP	Durmator Platform	ISB	Istanbul Block	KuB	Kure Basin	MLB	Molde Lunge Basin	PiB	Pichahun Basin	SoB	Somalia Coastal Basin	UoM	Ustyurt Massif
ATB	Alghan-Tadjik Basin	CAr	Carpathian Rift	DMZ	Dzula Massif	JaB	Jaisalmer Basin	KsB	Kuqa Basin	MOB	Moesian Platform	PiB	Pleshet Basin	SPB	South Pamir Block	VoM	Voronezh Massif
AIB	Antalya Basin	CKA	Central Karakum Arch	EOP	East European Platform	JAP	Junggar Alatau Plateau	KIB	Kuznetsk Basin	MaB	Mesopotamian Basin	PmB	Pamir Basin	SQP	South Qiang Tang Platform	WaB	Walshan Basin
AIR	Altai Range	CIM	Cimmerian Foredeep Basin	EMF	East Manych Fold-Thrust Belt	JAR	Junggar Alatau Range	KuB	Kure Basin	Msr	Mesopotamian Basin	POB	Pindos-Olonos Basin	Sva	Stavropol Arch	SyP	Scythian Platform
AvP	Avroman Platform	CIR	Cimmerian Range	JgB	Junggar Range	KYP	Kimmerian Range	LAB	Lakka Basin	MUB	Murzuk Basin	POt	Polish Trough	QAa	Qatar Arch	TaB	Tarim Basin
BBB	Bande-Bayan Block	CKA	Central Karakum Arch	CEP	Ceodik Platform	KAF	Kara Audaan Fold-Thrust Belt	LAB	Lakka Basin	LUP	Lhasa Platform	NEP	Neotric Exotics Platform	QOB	Qiang Tang Orogenic Belt	TaH	Tatarian High
BDP	Bey Daglan Platform	CMB	Central Mountains Block	CEB	Ceodik Basin	KAP	Kara Bogaz High	LBP	Lim Basin	NOB	Northeast German Basin	RHB	Rhodope Basin	TaM	Tabas Massif	TgB	Turgay Basin
BgR	Bogdoshan Range	CPB	Chott Pamir Block	GOB	Gotnia Basin	KBT	Karabekaul Trough	LUP	Lut Platform	NIR	North Indian Kush Rift	RHT	Rhensberg Trough	TKR	Tom Koilyan Range		
BHM	Bohemian Massif	CLM	Central Uralian Massif	GTP	Gavrovo-Tripolizza Platform	KCP	Karaburum Chics Platform	LUP	Lut Platform	NIP	North Iranian Platform	RPO	Remnant Paleo-Tethys Ocean	TKR	Tom Koilyan Range		



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

TOARCIAN (182.7 - 174.1 Ma)

Map 4

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

Contributors: ANGIOLINI L., KAVEH F., PLUNDER A., POISSON A., POURTEAU A., ROBERTSON A., SHEKAWAT R., SOSSON M., ZANCHI A.

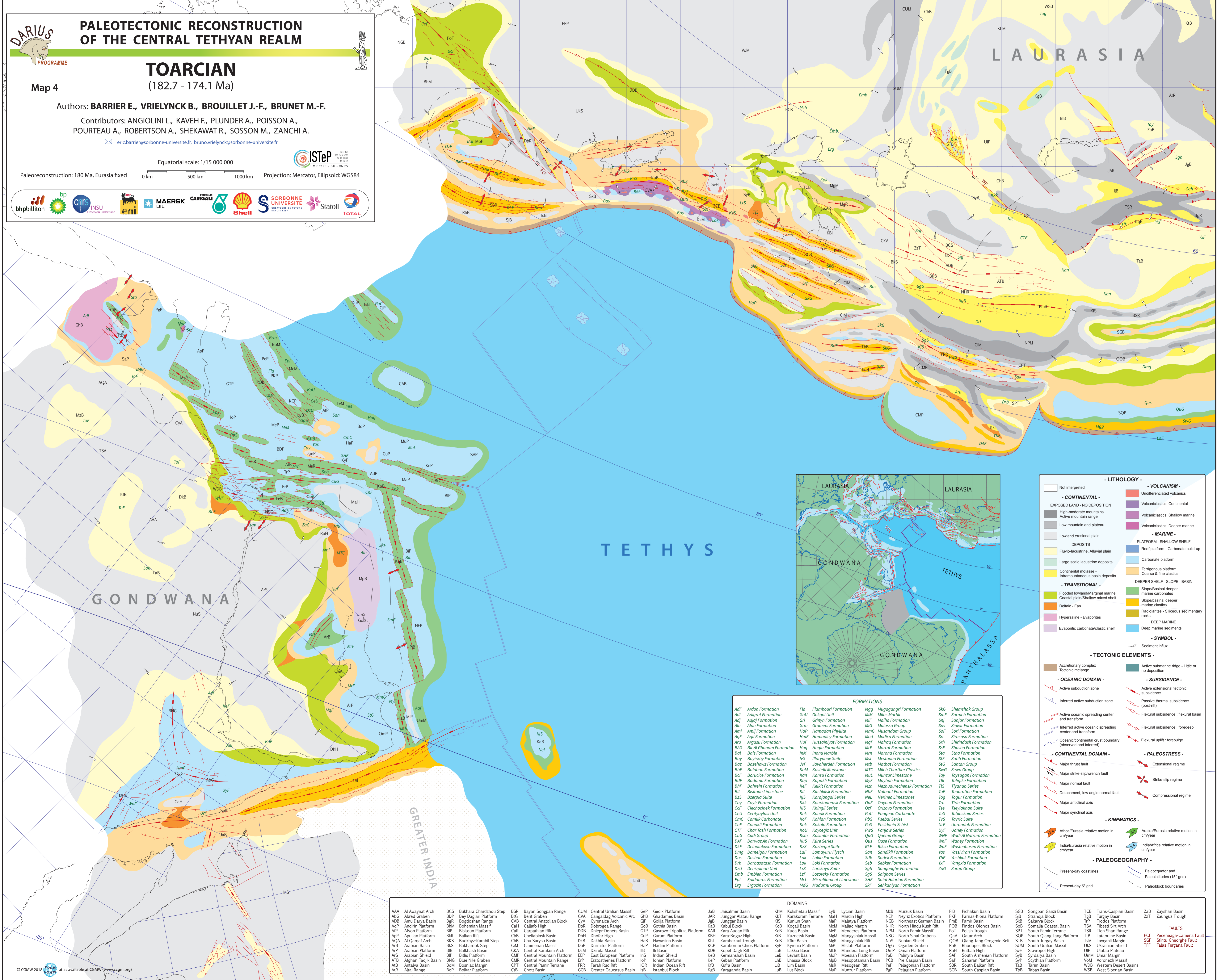
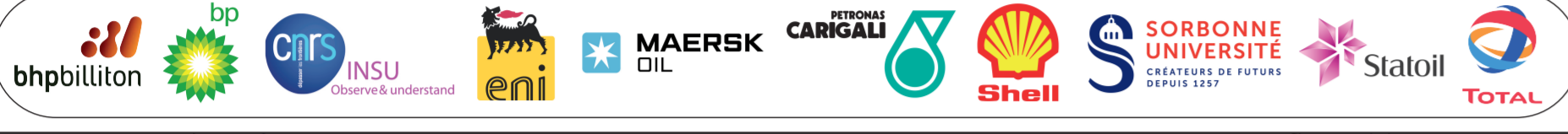
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Equatorial scale: 1/15 000 000

0 km 500 km 1000 km

Projection: Mercator, Ellipsoid: WGS84



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- High-moderate mountains
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- Lowland erosional plain
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- Fluvio-lacustrine, Alluvial plain
- Large scale lacustrine deposits
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- TRANSITIONAL
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- Coastal plain/Shallow mixed shelf
- Deltaic - Fan
- Hypersaline - Evaporites
- Evaporitic carbonate/clastic shelf
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- Volcaniclastics: Shallow marine
- Volcaniclastics: Deeper marine
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- Paleoequator and Paleolatitudes (15° grid)
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- Inferred active subduction zone

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- KINEMATICS -

- Africa/Eurasia relative motion in cm/year
- India/Eurasia relative motion in cm/year
- Arabia/Eurasia relative motion in cm/year
- India/Africa relative motion in cm/year

- FAULTS

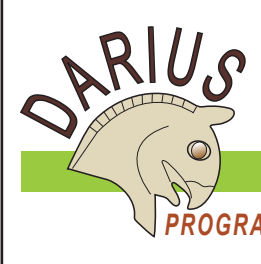
- PCF Pecteneaga-Camena Fault
- SGF Sirtu-Gheorghe Fault
- TF Taba-Fergana Fault

FORMATIONS

AdF Ardian Formation	Fla Flambrouri Formation	Mgg Muggangangi Formation	SKG Shemshok Group
Adj Adigrat Formation	GoU Gokgol Unit	MIM Milas Marble	Smf Surmei Formation
Aln Alin Formation	Gri Grinyan Formation	MIF Malha Formation	Snj Sanjar Formation
Ami Anij Formation	Gim Griemeni Formation	MIG Milussa Group	Srv Sivi Formation
Amf Amant Formation	HmF Hamanley Formation	Mmg Mesodrom Group	Ssc Sari Formation
Aru Argasu Formation	HuF Hussainiyat Formation	Mod Modica Formation	Src Sirocusa Formation
BAG Bir Al Ghanam Formation	Hug Huglu Formation	Maf Mafraq Formation	Srh Shirindash Formation
Bol Bol's Formation	Inou Inoua Marble	Mra Marona Formation	Ssf Shusha Formation
Bay Bayirkydy Formation	Ilv Illyanov Suite	Mst Mestoua Formation	Sta Stoa Formation
Baz Bazehowz Formation	JvF Javaherdeh Formation	Mtb Matbat Formation	StF Sahtan Group
BaF Balaban Formation	KaM Kastelli Mudstone	MTC Mileh Tharhar Clastics	SwG Sewo Group
BcF Bauruce Formation	Kan Kansu Formation	Mul Munzur Limestone	Tay Toyuzgan Formation
BuF Badamu Formation	Kap Kapakli Formation	Muy Mayyah Formation	Tik Taligake Formation
BH Bahrein Formation	KeF Kelkit Formation	Mzh Mezhdureshchensk Formation	Tly Tlyanub Series
BL Bistoun Limestone	Kit Kitichiksk Formation	NbF Nalbant Formation	ToF Taouratine Formation
BzS Bzepo Suite	Kjs Karajongal Series	Nel Nerinea Limestone	Tog Togur Formation
Coy Coyir Formation	Kis Khingil Series	OsO Ouyoun Formation	Trn Trin Formation
CeU Cerityayasi Unit	Knk Kanak Formation	PaC Pangeon Carbonate	Tse Tseyakhan Suite
CmC Comilk Carbonate	KoF Kohlan Formation	Pes Pesebi Series	Tvs Tavric Suite
CmF Comilk Formation	Kok Kokala Formation	Pos Posidonii Schist	UyF Uzunob Formation
CuF Char Tash Formation	KoU Koyagay Unit	PwS Panjow Series	UyF Ulaney Formation
CuG Cudi Group	Ksm Kasimlar Formation	QuG Quemo Group	WNF Wadi Al Natrum Formation
Daf Darwaz An Formation	KuS Kure Series	Qus Quse Formation	Wnf Waney Formation
DdF Delinalukova Formation	KzS Kazbegul Suite	Rfk Rikso Formation	Wuf Wustenhusen Formation
DmF Damaigaya Formation	Laf Lemayurya Flysch	Yas Yassivision Formation	Yas Yassivision Formation
Dos Dashan Formation	Lak Lakia Formation	Sdk Sadek Formation	Yhf Yashukuk Formation
Drb Darbasatash Formation	Lok Laki Formation	Seb Sebker Formation	Yvf Yangyay Formation
DuU Denizpazar Unit	Lrs Larkoya Suite	Sgh Sanganghe Formation	ZoG Zaraqa Group
Emb Emben Formation	LfF Lazovsky Formation	Sgs Soghan Series	
Epi Epidaurus Formation	Mcl Microliffment Limestone	Sht Saint Hiliran Formation	
Erg Ergozin Formation	Mdg Mudiuru Group	Skf Sekhanyan Formation	

DOMAINS

AAA Al Aynat Arch	BSC Bukhara Chardzhou Step	BSR Bayan Songpan Range	CUM Central Uralian Massif	GeP Gedik Platform	Jab Jaisalmer Basin	KM Kokshetau Massif	LyB Lycian Basin	MbB Murzuk Basin	PB Pichakun Basin	SGB Songpan Ganzi Basin	TCB Trans-Caspian Basin	ZaB Zayshan Basin
ABG Abred Graben	BGD Bey Daglari Platform	BNG Bert Graben	CVA Cangialag Volcanic Arc	ChB Chabul Block	JAR Junggar Natatau Range	KKT Karakoram Terrane	MaP Malaya Platform	NEP Neiya Exotics Platform	PAm Pama-Khona Platform	SIB Sirañda Block	TG Turgaya Basin	ZZT Zaungze Trough
ADB Amu Darya Basin	BGR Bogdoshan Range	BGM Bohemian Massif	CAB Central Anatolian Block	GP Golja Platform	Jab Junggar Basin	KIS Kunlun Shan	MaP Malaya Platform	NEP Northeast German Basin	PAm Pamir Basin	SIB Sakarya Block	TP Tirdos Platform	
ADP Andrin Platform	BHM Bohemian Massif	CAH Callafo High	CAH Callafo High	GP Golja Platform	KaB Kabul Block	Kob Koqali Basin	MCM Malacc Margin	NRH North Hindu Kush Rift	POB Pindos-Olonos Basin	Sob Somalia Coastal Basin	TSa Tibesti Sirt Arch	
APF Apulan Platform	BIF Bistoun Platform	Car Carpathian Rift	CBK Chelabinsk Basin	GP Gurum Platform	KaB Kara Audañ Rift	Kob Koba Basin	MMP Menderes Platform	NSM North Pamir Massif	Pol Polish Trough	Sob South Pamir Terrane	TSR Tien Shan Range	
APF Apulan Platform	BKR Balkan Rift	DBH Dniepr-Donets Basin	DBH Dniepr-Donets Basin	GP Gurum Platform	KbH Kara-Bogaz High	Kob Koba Basin	MgM Mangyshlak Massif	NSG North Sinai Grabens	QAR Qatar Arch	SQF South Qiang Tang Platform	TIB Tataboune Basin	PCF Pecteneaga-Camena Fault
AQA Al Qaraq Arch	BKS Badkhyz-Karabil Step	DBK Dniepr-Donets Basin	DBK Dniepr-Donets Basin	GP Gurum Platform	KbH Kara-Bogaz High	Kob Koba Basin	MgM Mangyshlak Massif	NSG North Sinai Grabens	QAT Qatar Arch	SQF South Qiang Tang Platform	TIB Tataboune Basin	PCF Pecteneaga-Camena Fault
AB Araban Basin	BKS Badkhyz-Karabil Step	DmF Damaigaya Formation	DmF Damaigaya Formation	GP Gurum Platform	KbH Kara-Bogaz High	Kob Koba Basin	MgM Mangyshlak Massif	NSG North Sinai Grabens	QAT Qatar Arch	SQF South Qiang Tang Platform	TIB Tataboune Basin	PCF Pecteneaga-Camena Fault
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AP Araban Platform	BKS Badkhyz-Karabil Step	DmF Damaigaya Formation	DmF Damaigaya Formation	GP Gurum Platform	KbH Kara-Bogaz High	Kob Koba Basin	MgM Mangyshlak Massif	NSG North Sinai Grabens	QAT Qatar Arch	SQF South Qiang Tang Platform	TIB Tataboune Basin	PCF Pecteneaga-Camena Fault
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AP Araban Platform	BKS Badkhyz-Karabil Step	DmF Damaigaya Formation	DmF Damaigaya Formation	GP Gurum Platform	KbH Kara-Bogaz High	Kob Koba Basin	MgM Mangyshlak Massif	NSG North Sinai Grabens	QAT Qatar Arch	SQF South Qiang Tang Platform	TIB Tataboune Basin	PCF Pecteneaga-Camena Fault
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AP Araban Platform	BKS Badkhyz-Karabil Step	DmF Damaigaya Formation	DmF Damaigaya Formation	GP Gurum Platform	KbH Kara-Bogaz High	Kob Koba Basin	MgM Mangyshlak Massif	NSG North Sinai Grabens	QAT Qatar Arch	SQF South Qiang Tang Platform	TIB Tataboune Basin	PCF Pecteneaga-Camena Fault
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AP Araban Platform	BKS Badkhyz-Karabil Step	DmF Damaigaya Formation	DmF Damaigaya Formation	GP Gurum Platform	KbH Kara-Bogaz High	Kob Koba Basin	MgM Mangyshlak Massif	NSG North Sinai Grabens	QAT Qatar Arch	SQF South Qiang Tang Platform	TIB Tataboune Basin	PCF Pecteneaga-Camena Fault
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AP Araban Platform	BKS Badkhyz-Karabil Step	DmF Damaigaya Formation	DmF Damaigaya Formation	GP Gur								



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

CALLOVIAN (166.1 - 163.5 Ma)

Map 5

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

Contributors: ANGIOLINI L., KAVEH F., PLUNDER A., POISSON A., POURTEAU A., ROBERTSON A., SHEKAWAT R., SOSSON M., ZANCHI A.

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Equatorial scale: 1/15 000 000

0 km 500 km 1000 km

Projection: Mercator, Ellipsoid: WGS84



- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
- MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Continental molasse - Intramontaneous basin deposits
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Deltaic - Fan
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
- TRANSITIONAL -**
 - Flooded lowland/Marginal marine
 - Coastal plain/shallow mixed shelf
 - DEEP MARINE
 - Deep marine sediments

- VOLCANICISM -

- Undifferentiated volcanics
- Volcaniclastics: Continental
- Volcaniclastics: Shallow marine
- Volcaniclastics: Deeper marine

- SYMBOL -

- Sediment influx

- TECTONIC ELEMENTS -

- Accretionary complex
- Tectonic melange
- Active submarine ridge - Little or no deposition
- OCEANIC DOMAIN -**
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
- SUBSIDENCE -**
 - Active extensional tectonic subsidence
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
 - Flexural uplift: forebulge
- CONTINENTAL DOMAIN -**
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Major antinormal fault
 - Major antinormal axis
 - Major synclinal axis
- PALEOSTRESS -**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
- KINEMATICS -**
 - Africa/Eurasia relative motion in cm/yr
 - Arabia/Eurasia relative motion in cm/yr
 - India/Eurasia relative motion in cm/yr
 - India/Africa relative motion in cm/yr
 - Present-day coastlines
 - Paleoequator and Paleolatitudes (15° grid)
 - Paleoblock boundaries
 - Present-day 5° grid
- PALEOGEOGRAPHY -**



FORMATIONS									
Adi Adigrat Formation	Bls Balabansa Formation	ELF Esfandiari Limestone Formation	HpF Himmetpasa Formation	Krn Karagansay Formation	Mub Mubarek Formation	QkF Qokemake Formation	SsG Shidugou Group	Tvs Tavris Suite	TyZ Tyazhin Formation
AjF Aroj Formation	Bsa Ben Saldane Formation	EPF Epislopi Formation	Hug Hugli Formation	Kst Kastanai Formation	MUL Munzur Limestone	QQR Qulqula Radiolarite	Ssr Sangasar Formation	SrF Sotchi Formation	WdF Wadi Al Qayum Formation
Akk Akkaya Formation	Buc Buchen Formation	ESF Eserizai Formation	InM Inonu Marble	Klt Katalay Formation	MwF Muhawir Formation	Ran Rannest Formation	SfF South Formation	WdF Wadi Al Qayum Formation	WfF Wargach Formation
AmG Amran Group	BuF Buiruk Formation	Fau Faustai Formation	Jaf Jilbuqa Formation	Kut Kutlug Series	MyF Mayhuf Formation	Sgt Sahtan Group	WsS Waras Series	WfF Wargach Formation	WfF Wargach Formation
AoF Aorom Formation	BvF Bov Formation	Fla Flamouri Formation	Kaf Kafaklin Formation	Kys Kamenomatsky Series	Nou Naouk Formation	Sul Sulvuk Formation	WfF Waras Series	WfF Wargach Formation	WfF Wargach Formation
AqF Aqil Formation	Cal Caishan Formation	FTF Fom Totaouine Formation	Kal Kambe Limestone	LoF Lamayuru Flysch	NbF Nalbant Formation	SvF Suvula Formation	Xif Xiaoli Formation	Xif Xiaoli Formation	Xif Xiaoli Formation
Arh Arimi Suite	CBF Chamon Bid Formation	GSs Garovulisti Suite	KeR Kermanshah Radiolarites	Lok Laki Formation	NfF Nara Formation	SgF Sargelu Formation	XsF Xishuyao Formation	XsF Xishuyao Formation	XsF Xishuyao Formation
At Amal Formation	CeU Certiyulisti Unit	Ghu Ghurab Formation	Kes Kesovone Formation	MdG Maduru Group	NsF Navarra Suite	SgS Saighan Series	Yay Yaysagan Formation	Yay Yaysagan Formation	Yay Yaysagan Formation
Bay Bayyikay Formation	Cho Chahal Formation	Gou Gokgol Unit	Khf Khataba Formation	Mgf Mughanniya Formation	Nsf Nashira Formation	SfF Saif Formation	Yab Yablun Series	Yab Yablun Series	Yab Yablun Series
Bda Baidoa Formation	Cho Chastochovo Dolites	Grd Garadagain Formation	Kis Kion Suite	Mgg Mugangri Formation	NpF North Pamir Limestone	SfF Saif Formation	Zar Zarbu Formation	Zar Zarbu Formation	Zar Zarbu Formation
Bds Baidas Formation	Cmc Camik Carbonate	Grm Gramen Formation	Kiu Kiliza Unit	Mid Midia Formation	Pir Pindos Radiolarites	Sho Shordahn Series	Zem Zemcy Suite	Zem Zemcy Suite	Zem Zemcy Suite
AQA Al Qaraq Arch	CuG Cudi Group	Guz Guvash Formation	Hkg Hokuyagok Formation	Mim Milas Marble	NqF North Qang Tang Platform	Sir Sirut Formation	ZfF Zohar Formation	ZfF Zohar Formation	ZfF Zohar Formation
BhF Bahrein Formation	Dhf Dhuma Formation	GwF Guwayza Formation	Kis Khingil Series	Mjf Masajid Formation	PmF Protogoligenide Marls	SfF Saif Formation	ZkS Zakatala Suite	ZkS Zakatala Suite	ZkS Zakatala Suite
Bhl Bihen Limestone	Djf Demerji Formation	Hap Hamadan Phyllite	Kmf Karmar e Mehdi Formation	Mif Malha Formation	PwF Palaten Formation	Snf Surme Formation	Zve Zvezdet Formation	Zve Zvezdet Formation	Zve Zvezdet Formation
Bif Bidou Formation	Dif Dalicho Formation	HaF Haifa Formation	Knk Konak Formation	Mig Mulussa Group	PwS Panjaw Series	SqF Shuqra Formation	Zar Zarbu Formation	Zar Zarbu Formation	Zar Zarbu Formation
Bil Bistoun Limestone	Dzu Denizliani Unit	Hmf Hamanley Formation	Kou Koycegi Unit	Mmg Musandam Group	QdF Qal'eh-Dakhtar Formation	Src Siracus Formation	Tum Tumanik Formation	Tum Tumanik Formation	Tum Tumanik Formation

DOMAINS									
AAA Al Awaysat Arch	BKS Badkhyz-Karabil Step	Dbr Dobrogea Range	IIB Ili Basin	KTB Kuznetsk Basin	ME Malta Escarpment	PmB Pamir Basin	SPT South Pamir Terrane	USB Ustyurt Basin	USB Ustyurt Basin
ABG Abred Graben	BKS Bakhardok Step	DOB Dnepr-Donets Basin	INS Indian Shield	KUB Kure Basin	MUP Moscow Platform	POB Pindos-Olonos Basin	SCQ South Qiang Tang Platform	VOM Voronezh Massif	VOM Voronezh Massif
ABM Abroz Margn	BIB Balkhash Basin	DH High Dhorfar High	ION Ionian Basin	KYB Kyrena Platform	MwB Moscow Basin	POT Polish Trough	STB South Turgay Basin	WB Western Desert Basins	WB Western Desert Basins
ADB Amu Darya Basin	BlB Bitlis Platform	DIB Dakhla Basin	ISB Istanbul Block	KZB Kazakh Plateau	MzB Murzuk Basin	PAK Paikon Volcanic Arc	SUL South Uralian Massif	WfF Wargach Formation	WfF Wargach Formation
ADP Andrin Platform	BNG Blue Nile Graben	DUP Dumret Platform	JAB Jaisalmer Basin	KZP Kazakh Plateau	NBR Nizry Exotics Platform	QAA Qatar Arch	SWH Stavropol High	ZB Zayshan Basin	ZB Zayshan Basin
AP Ayon Platform	BoP Bosnae Margin	Dza Dzirula Massif	JAR Junggar Altai Range	LAB Laikha Basin	NEB Northeast German Basin	QKB Qulqula-Khwakurk Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
AP Alania Platform	BoP Bosnae Margin	EEP East European Platform	Jab Junggar Basin	LB Levant Basin	NHR North Hindu Kush Rift	RHD Rhodopes Block	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
AP Apulian Platform	BSR Bayan Songnan Range	EFB East Fergana Basin	KaB Kabal Block	LUB Lhasa Block	NPM North Pamir Massif	RKB Rub'Al Khali Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
AQA Al Qaraq Arch	CM Cimneman Massif	GCB Greater Caucasus Basin	KBN Kara-Bogaz-Trough	LB Lut Block	NQP North Qang Tang Platform	RuH Rub'Al Khali Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
ArB Arabian Basin	CB Central Anatolian Block	EP East European Platform	KaB Karabekau Trough	LYB Lycian Basin	NSG North Sina Graben	SAP South Armenian Platform	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
ArP Arabian Platform	CaB Carpathian Basin	FBF Farah Rud Basin	KCB Karabum Chos Platform	LYB Lycian Basin	NUS Nubian Shield	SAP Saharan Platform	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
ArS Arabian Shield	CM Cimneman Massif	GCB Greater Caucasus Basin	KDB Karamay Basin	MAH Mardin High	OCG Oman Platform	SBB South Balkan Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
ATB Afghan-Tadjik Basin	CP Central Iranian Platform	GeP Gekik Platform	KEP Kermanshah Basin	MAH Mardin High	OCG Oman Platform	SCB South Caspian Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
AIM Anialya Margin	CP Central Karakum Platform	GB Gobi Basin	KEP Keban Platform	MAH Mardin High	OCG Oman Platform	SCB South Caspian Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
AR Altai Range	CM Central Mountain Platform	GP Golja Basin	KIB Kufra Basin	MEP Menderees Platform	OCG Oman Platform	SCB South Caspian Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
ArS Arabian Shield	CM Central Mountain Range	CoB Gobi Basin	KKB Kakkhetu Massif	MHT Mangshik High	OCG Oman Platform	SCB South Caspian Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
BDP Bey Daglan Platform	CP Central Pamir Terrane	GTP Garovo-Tripolita Platform	KK Karakoram Terrane	MP Mesafah Platform	OCG Oman Platform	SCB South Caspian Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
BgR Bogdoshan Range	CPT Central Pamir Terrane	GuP Gurum Platform	KIS Kunlun Shan	MOF Moesian Platform	OCG Oman Platform	SCB South Caspian Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
BH Baheman Massif	CB Choti Basin	Hap Hamadan Phyllite	KKB Kakkhetu Massif	MOF Moesian Platform	OCG Oman Platform	SCB South Caspian Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough
BIP Bistoun Platform	CUM Central Uralian Massif	Hap Hamadan Phyllite	KKB Kakkhetu Massif	MOF Moesian Platform	OCG Oman Platform	SCB South Caspian Basin	SyB Syrdarya Basin	ZT Zauquuz Trough	ZT Zauquuz Trough



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

LATE TITHONIAN (149 - 145.0 Ma)

Map 6

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

Contributors: ANGIOLINI L., KAVEH F., PLUNDER A., POISSON A., POURTEAU A., ROBERTSON A., SHEKAWAT R., SOSSON M., ZANCHI A.

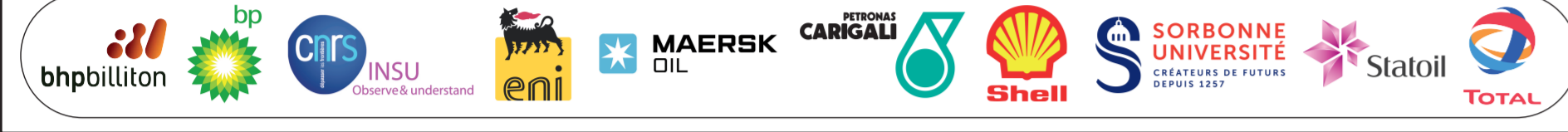
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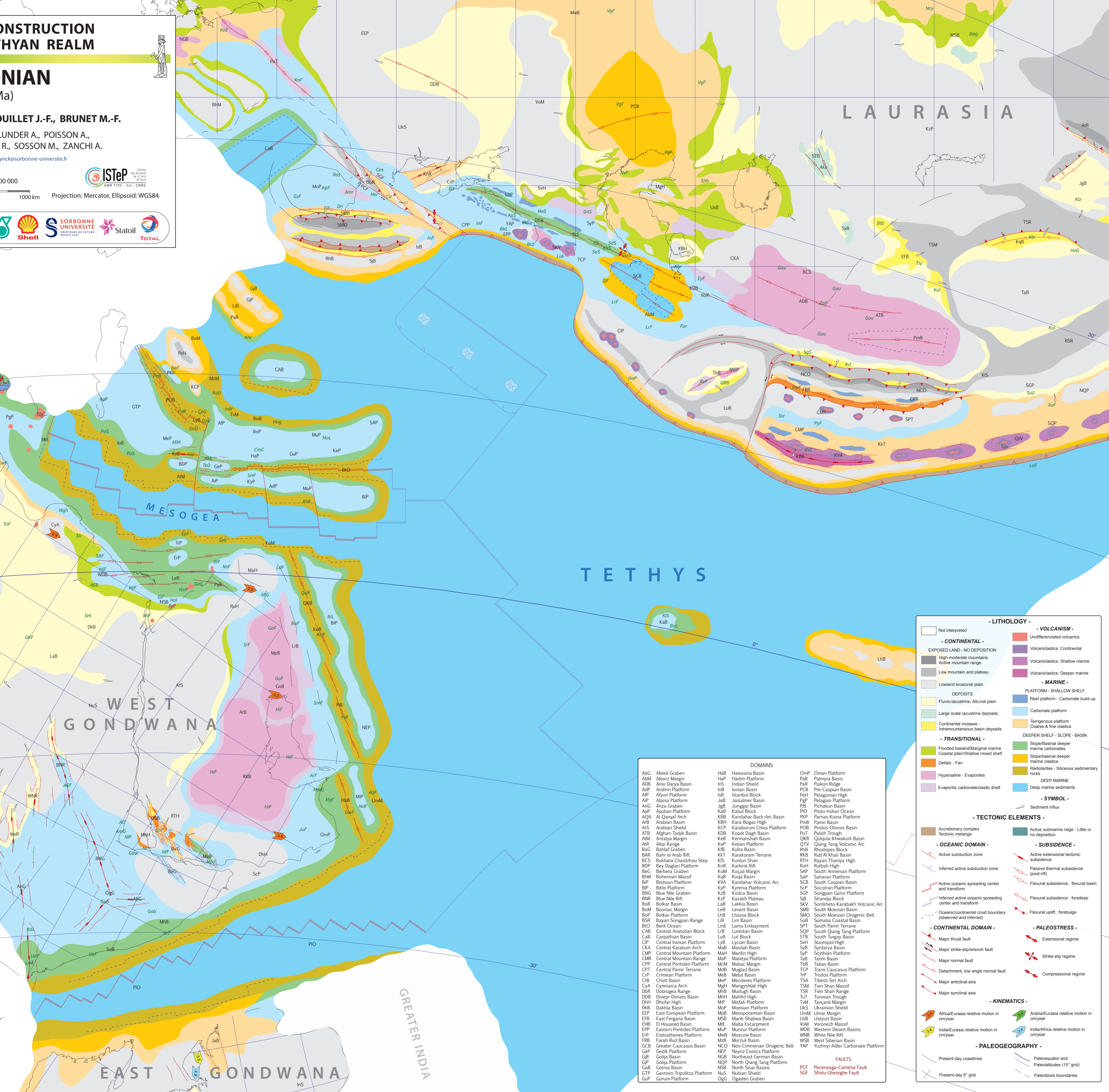
Equatorial scale: 1/15 000 000

0 km 500 km 1000 km

Projection: Mercator, Ellipsoid: WGS84



FORMATIONS	
ACL	Anchispirocyclus Limestone
ABE	Abud Formation
AGF	Abu Gh Formation
AKB	Akshabulok Formation
AKK	Akkaya Formation
AMG	Amn Group
AMR	Amara Formation
APs	Agesst Suite
AqF	Aqil Formation
AF	Arab Formation
ATA	Atata Formation
BAF	Basarin Formation
BAG	Bagan Formation
BEF	Beaton Flysch
BEI	Belemite Limestones
BIF	Birklaya Formation
BIL	Bisulou Limestone
BIT	Bitak Formation
BLK	Black Limestones
BLB	Balabugun Formation
BRD	Berdiga Formation
CAS	Casimcea Formation
CEU	Cerityayasi Unit
CHI	Chiaromonte Formation
CIR	Cirjelavi Formation
CMC	Camlik Carbonate
DRI	Drino Formation
DUS	Duzist Suite
DEU	Denizli Unit
EPF	Epiokopi Formation
EYF	Elyderin Formation
FAR	Farlan Formation
GAB	Gabrova Formation
GAU	Gaurdak Formation
GAW	Gawan Formation
GEV	Gevaran Group
GIF	Gilgala Formation
GKF	Gill Kebir Formation
GNs	Gondalbos Suite
GOF	Gonia Formation
GOU	Gokagi Unit
GRB	Gorede Red Beds
GUW	Guwayza Formation
GZF	Glazhene Formation
HAI	Halutza Formation
HAP	Hamadan Phyllite
HER	Heraclea Formation
HIF	Hith Formation
HOg	Hangshan Group
HUG	Huglu Formation
ISU	Issa Suite
INF	Inalti Formation
INM	Inonu Marble
JUF	Jubaila Formation
KAL	Kambe Limestone
KBR	Karaburun Formation
KEr	Kermanshah Radiolrites
KHR	Khromi Formation
KIS	Khalton Suite
KIU	Kialta Unit
KIS	Khingil Series
KLZ	Kalazha Formation
KNF	Kynia Formation
KNK	Kanak Formation
KOU	Koycegiz Unit
KPF	Kaspichan Flysch
KRI	Karabil Formation
KUL	Kuizhong Formation
KVC	Kandahar Volcanic Complex
KWF	Kabaw Formation
LAf	Lamayuru Flysch
LOR	Lagonaki Reef
LEF	Latsiyi Formation
LOK	Loki Formation
LRF	Lar Formation
MAD	Madbi Formation
MAL	Malaon Formation
MEA	Merbarh El Asfer Formation
MEs	Mezmi Series
MGF	Magu Gypsum Formation
MGH	Mallegh Formation
MIM	Mias Marble
MJF	Masajid Formation
MIF	Malha Formation
MIG	Mulusia Group
MNG	Musandam Group
MRY	Maryanov Formation
MUL	Munzur Limestone
MYF	Mayyah Formation
MZF	Mazuran Formation
NIF	Nayfa Formation
NF	Nara Formation
NSF	Nashira Formation
NOV	Novozayyn Formation
PIR	Pichakun Radiolrites
POr	Pindos Radiolrites
POs	Pisdonia Schist
PWF	Panjawa Flysch
PNF	Paynawa Formation
QUR	Qulqula Radiolrite
RAS	Rasova Formation
RAF	Ravar Formation
SAS	Saki Suite
SBI	Sidi Barrani Formation
SBF	Sabatayn Formation
SdS	Sudur Suite
SEB	Seber Formation
SGS	Soighan Series
SGX	Sangyu Formation
SHF	Saint Hillarion Formation
SHH	Shakhpakhin Series
SHI	Six Hills Formation
SIR	Sirval Formation
SIF	Shal Formation
SUM	Sumrah Formation
SGO	Soggar Formation
SSR	Songgar Formation
TD	Tepears Dolomite
TIC	Ticho Formation
TUL	Tulek Formation
TAU	Taurant Formation
TS	Tsinari Suite
TU	Tula Units
TYV	Tayasi Volcanics
UFG	Uzgi Formation
ULF	Ularadab Formation
ULV	Ularadab Formation
VGF	Volgian Formation
XU	Xueshan Formation
YAC	Yuzhnyi Adler Carbonate
YFM	Yam Formation
ZPF	Zarptchin Formation



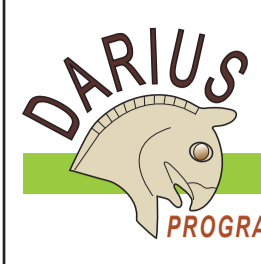
DOMAINS					
AbG	Abred Graben	HAB	Hawasina Basin	Omp	Oman Platform
ABM	Alborz Margin	HAP	Hadim Platform	PAB	Palmyra Basin
ADB	Amu Darya Basin	HS	Indian Shield	PAR	Parikon Ridge
ADP	Andrin Platform	IoS	Ionian Shield	PCB	Pre-Caspian Basin
AP	Ayon Platform	ISB	Istanbul Block	PEH	Pelagian High
APC	Alania Platform	JaB	Jassalmer Basin	PIF	Pelagian Platform
ANG	Anza Graben	JGB	Junggar Basin	PB	Pichakun Basin
AP	Apulian Platform	KAB	Kabul Block	PIO	Proto Indian Ocean
AQA	Al Qaraq Arch	KBB	Kandahar Back-Arc Basin	PNT	Panas-Kona Platform
ARB	Arabian Basin	KBH	Kara Bogaz High	PKB	Pamir Basin
AS	Arabian Shield	KCP	Karakorum Chios Platform	POB	Pindos-Olonos Basin
ATB	Atghan-Tadji Basin	KDB	Kopet Dag Basin	POI	Polish Trough
AM	Amajay Margin	KEB	Kermanshah Basin	QKB	Quilqa-Khwakurk Basin
AR	Altai Range	KEP	Keban Platform	QTV	Qiang Tang Volcanic Arc
BAG	Bahal Graben	KIR	Kufra Basin	RHB	Rhodopes Block
BAR	Bahr el Arab Rift	KoM	Koçali Terrane	RKB	Rubi'Al Khali Basin
BCS	Bukhara Chardzhou Step	KIS	Kurkun Shan	RTH	Rayan Thanya High
BDP	Bey Dagan Platform	KNR	Karkint Rift	RUI	Rubah High
BER	Berbera Graben	KoB	Koçali Margin	RUB	Rubi'Al Khali Basin
BOB	Boikar Basin	KoB	Koçali Basin	SAP	South Armenian Platform
BOM	Bosnac Margin	KQZ	Kozica Basin	SaP	Saharan Platform
BOP	Boikar Platform	KZP	Kazakh Plateau	SJB	Strandja Block
BSR	Bayan Songpan Range	LAB	Lakia Basin	SKV	Sonkhetto-Karabakh Volcanic Arc
BCT	Bent Ocean	LEB	Levant Basin	SMO	South Moesian Basin
CAB	Central Anatolian Block	LHB	Lhasa Block	SMB	South Moesian Orogenic Belt
CAB	Carpathian Basin	LIM	Lim Basin	SOB	Somalia Coastal Basin
CIP	Central Iranian Platform	LNE	Lami Embayment	SPT	South Pamir Terrane
CKA	Central Karakum Arch	LRF	Lurestan Basin	SQP	South Qiang Tang Platform
CMP	Central Mountain Platform	LUB	Lut Block	STB	South Turqay Basin
CPT	Central Pamir Terrane	LYB	Lycian Basin	STP	Stavropol High
CP	Crimean Platform	MAB	Masilah Basin	SyB	Syrdarya Basin
CIB	Chott Basin	MAH	Mardin High	SyP	Scythian Platform
CYA	Cyrenaica Arch	MAP	Maliya Platform	TAB	Tarim Basin
DDR	Dobrogea Range	MBB	Muglad Basin	TCP	Trans-Caucasian Platform
DOB	Dnepr-Donets Basin	MEB	Meitai Basin	TIP	Troodos Platform
DHM	Dhofar High	MEP	Mendes Platform	TSA	Tibesti Sirt Arch
DB	Dakha Basin	MGH	Mangyshlak High	TSM	Tien Shan Massif
DEP	East European Platform	MHB	Mudugh Basin	TSR	Tien Shan Range
EFB	East Fergana Basin	MHH	Mafiq High	TUM	Tunisian Trough
EBH	El Houared Basin	MIP	Misfat Platform	TVM	Tavcani Margin
EPP	Eastern Pontides Platform	MOP	Moesian Platform	UKM	Ukrainian Shield
ERP	Eurosthenes Basin	Mpb	Mesopotamian Basin	UMM	Umar Margin
FRB	Farah Rud Basin	MSB	Marib-Shabwa Basin	USB	Ustyurt Basin
GCB	Greater Caucasus Basin	ME	Malta Escarpment	VOM	Voronzh Massif
GeP	Gedik Platform	MUP	Munzur Platform	WOB	Western Desert Basins
GJB	Golja Basin	MWB	Moscow Basin	WNR	White Nile Rift
GP	Golja Platform	MZB	Murzuk Basin	WSB	West Siberian Basin
GOB	Greater Omani Basin	NCP	North Cyprian Orogenic Belt	YAP	Yuzhnyi-Adler Carbonate Platform
GTP	Gavrovo-Tripolizza Platform	NSB	North Qiang Tang Platform		
GuP	Gurum Platform	NSI	North Sinai Basins		
		NUS	Nubian Shield		
		OGG	Ogaden Graben		

- LITHOLOGY -

- Not interpreted
- EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Low mountain and plateau
 - Lowland erosional plain
- DEPOSITS
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Continental molasse
 - Intramontane basin deposits
- TRANSITIONAL
 - Flooded lowland/Marginal marine
 - Coastal plain/Shallow mixed shelf
 - Deltaic - Fan
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
- VOLCANISM -
 - Undifferentiated volcanics
 - Volcaniclastics: Continental
 - Volcaniclastics: Shallow marine
 - Volcaniclastics: Deeper marine
- MARINE -
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Terrigenous platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/Basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radiolrites - Siliceous sedimentary rocks
 - DEEP MARINE
 - Deep marine sediments
- SYMBOL -
 - Sediment influx

- TECTONIC ELEMENTS -

- Accretionary complex
- Tectonic melange
- OCEANIC DOMAIN
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (observed and inferred)
- CONTINENTAL DOMAIN
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major anticlinal axis
 - Major syndinal axis
- SUBSIDENCE -
 - Active extensional tectonic subsidence
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
 - Flexural uplift: forebulge
- PALEOSTRESS -
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
- KINEMATICS -
 - Africa/Eurasia relative motion in cm/yr
 - India/Eurasia relative motion in cm/yr
 - Arabia/Eurasia relative motion in cm/yr
 - India/Africa relative motion in cm/yr
- PALEOGEOGRAPHY -
 - Present-day coastlines
 - Present-day 5° grid
 - Paleo-equator and Paleolatitudes (15° grid)
 - Paleoblock boundaries



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

HAUTERIVIAN (132.9 - 129.4 Ma)

Map 7

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

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Equatorial scale: 1/15 000 000

0 km 500 km 1000 km

Projection: Mercator, Ellipsoid: WGS84



- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
- MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Continental molasse - Intracontinental basin deposits
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/Basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radiolarians - Siliceous sedimentary rocks
 - DEEP MARINE
 - Deep marine sediments
- VOLCANISM -**
 - Undifferentiated volcanics
 - Volcaniclastics: Continental
 - Volcaniclastics: Shallow marine
 - Volcaniclastics: Deeper marine
- SYMBOL -**
 - Sediment influx

- TECTONIC ELEMENTS -

- Accretionary complex
- Tectonic mélange
- Active submarine ridge - Little or no deposition
- Active extensional tectonic subsidence
- Passive thermal subsidence (geost.)
- Flexural subsidence: flexural basin and transform
- Flexural subsidence: foredeep
- Oceanic/continental crust boundary (observed and inferred)
- Flexural uplift: forebulge

- OCEANIC DOMAIN -

- Active subduction zone
- Inferred active subduction zone
- Active oceanic spreading center and transform
- Inferred active oceanic spreading center and transform
- Oceanic/continental crust boundary (observed and inferred)

- CONTINENTAL DOMAIN -

- Major thrust fault
- Major strike-slip/wrench fault
- Major normal fault
- Detachment, low angle normal fault
- Major anticlinal axis
- Major synclinal axis

- PALEOSTRESS -

- Extensional regime
- Strike-slip regime
- Compressional regime

- KINEMATICS -

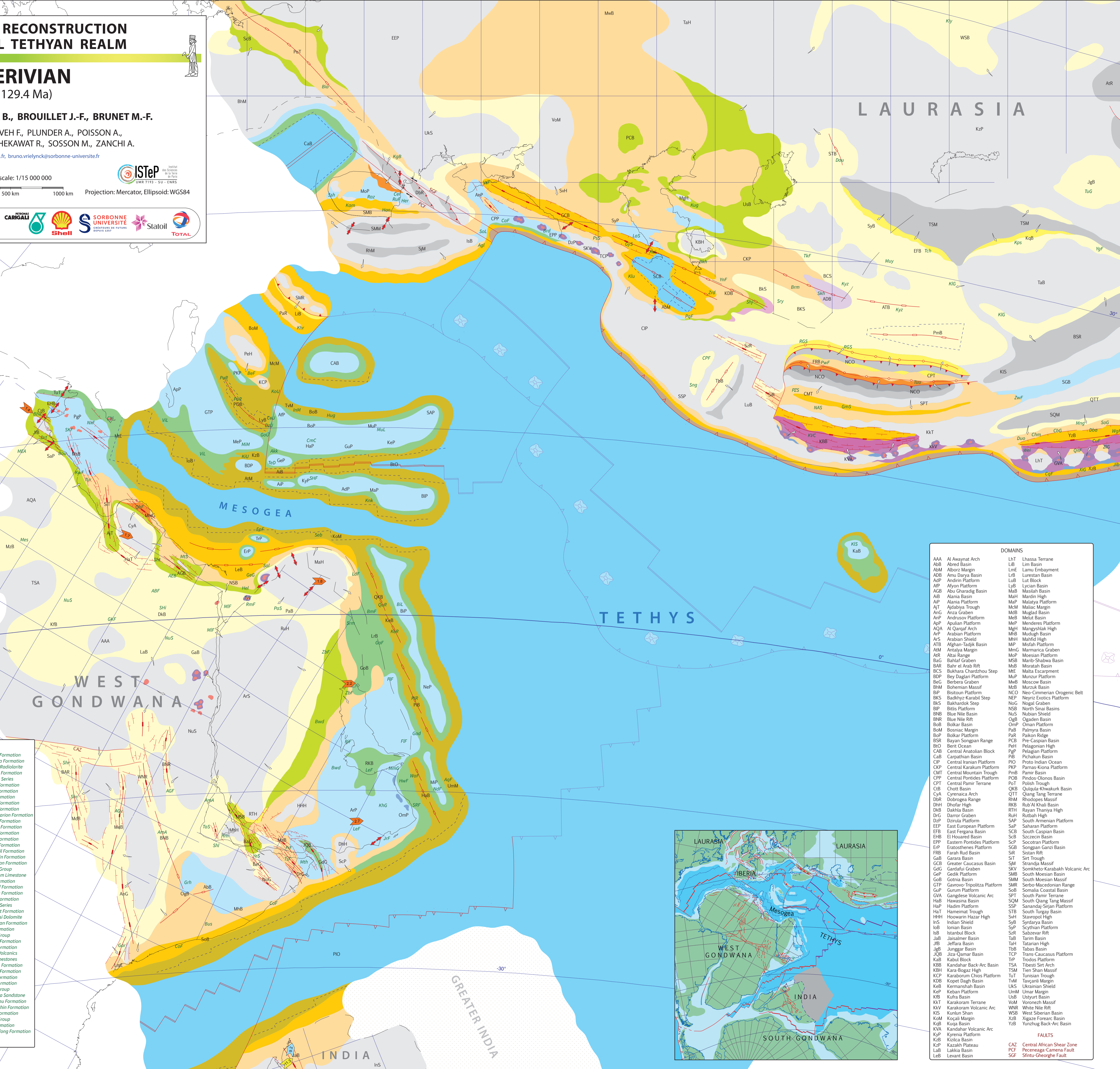
- Africa/Eurasia relative motion in cm/year
- Arabia/Eurasia relative motion in cm/year
- India/Eurasia relative motion in cm/year
- India/Africa relative motion in cm/year

- PALEOGEOGRAPHY -

- Present-day coastlines
- Paleoequator and Paleolatitudes (15° grid)
- Present-day 5° grid
- Paleoblock boundaries

FORMATIONS

ABF Abu Ballos Formation	Her Heracleo Formation	QHF Qahash Formation
AEB Alam El Buehi Formation	Hrh Harshiyat Formation	QNF Qushnia Formation
AGF Abu Gharadig Formation	Hug Hugli Formation	QUG Qulgula Radiolite
AGL Aglikly Formation	HwF Huwar Formation	RZG Razgrad Formation
AGY Abu Gayer Formation	ImM Innu Marble	RGS Red Girt Series
Akk Akkuyu Formation	Jib Jabula Formation	RIF Rotawi Formation
Amk Amba-Ardo Formation	JurF Jurf Formation	Rmf Ramel Formation
AGF Agil Formation	Kai Katar Suite	Ruf Ruse Formation
BeF Beetian Flysch	Kam Kamchia Formation	Sol Salima Formation
Bhd Bouhedma Formation	KeR Kermanshah Radiolites	Seb Seber Formation
Bla Biabulzezi Formation	KgB Konak Beds	SHF Soint-Hillan Formation
BIL Bilsiton Limestone	KHG Kahmah Group	SHS She Hills Formation
Bkh Bakharden Formation	Khr Khramni Formation	ShJ Shurijeh Formation
Bmf Balambo Formation	KIU Kilca Unit	Shr Sharaf Formation
Bou Bouloha Formation	Kiy Kiyaj Formation	Shr Sharaf Formation
Brd Bardiga Formation	KIS Kishgali Series	SKF Sidi Krall Formation
Brm Bayramli Formation	KIS Kishgali Series	SKF Sidi Krall Formation
Bus Busul Formation	Klu Kolar Formation	SKh Shekhitin Formation
Bwd Buwald Formation	Knk Kokak Formation	Sng Songstean Formation
CAF Caglayan Formation	KGU Koycegiz Unit	SOM Somali Group
CGF Chuabna Group	KPS Kapushan Group	SOL Sogukqam Limestone
Cer Cernavoda Formation	Kug Kugusan Formation	SRF Sid R Formation
CEU Ceriyayasi Unit	KVC Kandahar Volcanic Complex	Srm Saromad Formation
Chi Chirramonte Formation	KwF Kabow Formation	Sry Sayarin Formation
Chm Chumulong Formation	Kyz Kyzylash Formation	Ssh Shalsh Formation
CmC Comilk Carbonate	LoS Laza Suite	ToS Towilsh Series
CoF Cotton Formation	LdF Latdayi Formation	Tch Tchahmet Formation
CPF Chah Palang Formation	LeF Lekhwair Formation	TdD Tapeeras Dolomite
Cuf Chugchuy Formation	MEH Merbati El Afer Formation	TFH Tashkhan Formation
CuF Chumulong Formation	Mes Messak Formation	TSF Tisje Formation
Dau Daui Formation	MIM Milas Marble	TuG Tugulu Group
Dbu Duba Formation	MIF Malha Formation	Tur Turghat Formation
Dit Douiet Formation	MmG Musandam Group	Tuu Tuyuk Formation
Duo Duoni Formation	Mng Mangana Formation	TWV Tawar Formation
Dzu Denizpini Unit	Mth Mustahil Formation	VIL Vigla Limestones
EpF Episkopi Formation	MIS Matruh Shale	VsF Veseloye Formation
Fif Fahiyun Formation	Mul Munzur Limestone	Wof Wahrah Formation
Fut Fut Formation	Muy Muyan Formation	Wei Weien Formation
God Godvar Formation	NAS Nowzad Alekoy Series	Wfg Wuga Formation
GoF Garau Formation	Ndf Nadan Formation	XIG Xigaze Group
Gar Garbahare Formation	NUS Nubian Sandstones	Yes Yesamma Sandstone
GeS Gevanon Group	Nof Naxos Formation	Yof Yagelma Formation
GHF Gilf Kebir Formation	PaS Palmyra Sandstones	Yof Yagelma Formation
Gms Gamow Series	PIR Pichakun Radiolites	ZbF Zubairi Formation
GoU Gokgol Unit	Por Pindos Radiolites	ZIG Zelang Group
Grh Gorahi Formation	PqF Paqaleh Formation	Zid Zard Formation
GyS Gyrikbulag Suite	PwS Pasani Suite	ZwF Zowawoling Formation
Han Hanewti Formation	PwF Panjaw Flysch	
Hel Helez Formation	PZS Pyrowali Zurl Series	

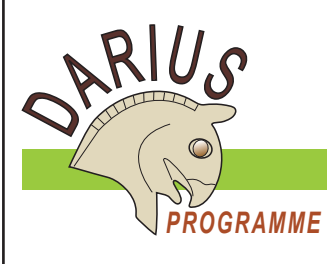


DOMAINS

AAA Al Awaysat Arch	LHT Lhasa Terrane
ABM Abred Basin	LiB Lim Basin
ADB Amu Darya Basin	LmE Lamu Embayment
ADP Andinn Platform	LrB Lurestan Basin
AIF Afyon Platform	LutB Lut Block
AGB Abu Gharadig Basin	LyB Lycian Basin
AIB Alania Basin	MaB Masliac Basin
AIP Alania Platform	MaiH Mardin High
AJT Ajdabya Trough	MaP Malatya Platform
Ang Anza Graben	Mch Maliac Margin
AndP Andrusov Platform	MdB Muglad Basin
ApP Apulian Platform	MeB Meilit Basin
AQA Al Qarraf Arch	MeP Menderes Platform
ArP Arabian Platform	Mgh Mangyshlak High
ARS Arabian Shield	MIB Mudugh Basin
ATB Afghan-Tadik Basin	MNH Maftid High
AMM Antalya Margin	MIP Mishaf Platform
ATR Altai Range	MngG Marmarica Graben
BAG Bahlaf Graben	MoP Moesian Platform
BAR Bahr el Arab Rift	MSB Marib-Shabwa Basin
BCS Bukhara Chardzhou Step	Msb Miratab Basin
BDF Bey Daglan Platform	ME Malta Escarpment
BEG Berbera Graben	MurP Munzur Platform
BHM Bohemian Massif	MvB Moscow Basin
BIP Bitlis Platform	MzB Murzuk Basin
BMB Blue Nile Basin	NCO Neo-Cimmerian Orogenic Belt
BNR Blue Nile Rift	NEP Neviz-Eozois Platform
BoB Bolkar Basin	NoG Nogal Graben
BOM Bosnac Margin	NSB North Sinai Basins
BoP Bolkar Platform	NUS Nubian Shield
BSR Bayan Songnan Range	OGB Ogden Basin
BIO Bent Ocean	OMP Oman Platform
CAB Central Anatolian Block	Pab Palmyra Basin
CaB Carpathian Basin	PakP Pakon Ridge
CAF Central Iranian Platform	PCB Pre-Caspian Basin
CMP Central Mountain Trough	Peh Pelagonian High
CPP Central Pontides Platform	PelP Pelagian Platform
CPT Central Pamir Terrane	PIB Pichakun Basin
CIB Chott Basin	PIO Proto Indian Ocean
Cya Cyrenaica Arch	PKP Karakoram Platform
DAR Dobrogea Range	CPT Central Pamir Trough
DHF Dhorat High	QGB Qandahar Graben
DIB Dakila Basin	QKF Qizilirmak Basin
DRG Darror Graben	QTT Qiang Tang Terrane
SAP South Arabian Platform	RKH Rhinopes Massif
EPP Eastern Pontides Platform	RKH Rub Al Khali Basin
EHB El Housaed Basin	RTH Rayan Thanyia High
ERP Eratosthenes Platform	Ruih Rutbah High
FAR Farah Road Basin	SAP South Arabian Platform
GAB Garara Basin	SaP Saharan Platform
GCB Greater Caucasus Basin	SCB South Caspian Basin
GAD Gandakhar Graben	ScB Sacczen Basin
GEF Gedik Platform	ScP Socotran Platform
GoB Gotnia Basin	SGS Songpan Ganzi Basin
GTP Gavrovo-Tripolizza Platform	SIR Sissak Rift
GUR Gurum Platform	SIT Sirt Trough
GVA Gangdese Volcanic Arc	SJM Sindh-Jambhava Volcanic Arc
HAB Hawasina Basin	SMB South Moesian Basin
HAP Hadim Platform	SOM Somalia Coastal Basin
HHH Howarain Hazar High	SPT South Pamir Terrane
IOB Ionian Basin	SQM South Qiang Tang Massif
ISB Istanbul Block	SST Sanandaj-Sirjan Platform
JAB Jaisalmer Basin	STB South Turgy Basin
JIB Jeffara Basin	SVH Stavropol High
JJB Junjagar Basin	SyB Syrtania Basin
KAB Kabul Basin	SyP Scythian Platform
KBB Kandahar Back-Arc Basin	SzK Szabzevar Rift
KAR Kara-Bogaz High	TaB Tarn Basin
KCP Karakoram Chos Platform	TaH Tatarian High
KDB Kopet Dagh Basin	TbB Tabas Basin
KEB Kermanshah Basin	TCP Trans-Caucasus Platform
KEP Keban Platform	TDF Troodos Platform
KIB Kufra Basin	TSA Tibesti Sirt Arch
KKT Karakoram Terrane	TSM Tien Shan Massif
KNV Kunlun Volcanic Arc	TUN Tunisian Trough
KIS Kunlun Shan	TWV Tavcanli Margin
KoM Kocali Margin	UKS Ukrainian Shield
KaB Kula Basin	Umm Umm Margat
KVA Kandahar Volcanic Arc	UsB Ustyurt Basin
KYP Kyrenia Platform	VmM Voronezh Massif
KzP Kazakh Plateau	WNR White Nile Rift
LaB Lakkia Basin	WSB West Siberian Basin
LeB Levant Basin	XzB Xigaze Forearc Basin
	YzB Yunthug Back-Arc Basin

FAULTS

CAZ Central African Shear Zone
PCF Peceneaga-Camena Fault
SFG Sirtu-Georghie Fault



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

LATE APTIAN (119 - 113.0 Ma)

Map 8

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

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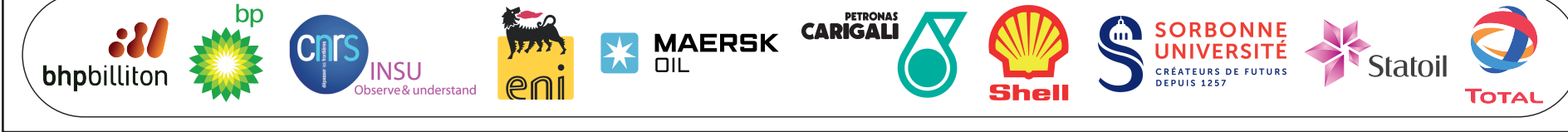
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Equatorial scale: 1/15 000 000

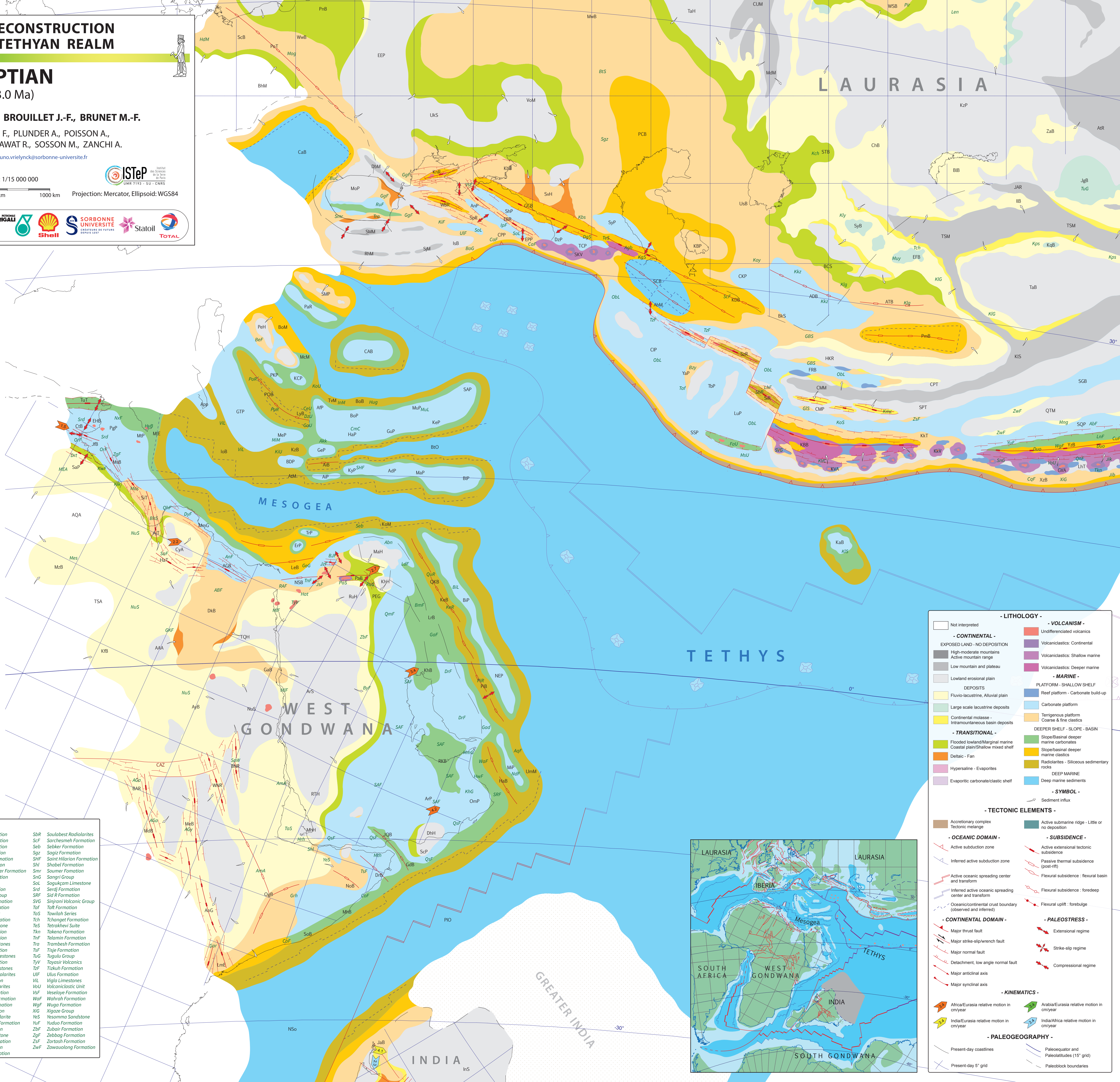
0 km 500 km 1000 km

Projection: Mercator, Ellipsoid: WGS84



DOMAINS	
AAA	Al Awaynat Arch
AbM	Aboruz Margin
ADB	Amu Darya Basin
AdP	Andrin Platform
AP	Alyon Platform
AGS	Abu Ghariyat Basin
Ala	Alania Basin
AlaP	Alania Platform
ATJ	Ajdahya Trough
AnG	Anza Graben
AnP	Andrusov Platform
ApP	Apsalian Platform
AQA	Al Qarqaf Arch
AP	Arabian Platform
AS	Arabian Shield
ATB	Afghan-Tadjik Basin
AM	Antalya Margin
AR	Alta Range
AyB	Abyad Basin
BAR	Bahr el Arab Rift
BICS	Bukhara Chardzhou Step
BOP	Bey Daglan Platform
BHM	Bohemian Massif
BoP	Bostoun Platform
BKS	Bakharok Step
BIB	Balkhash Basin
BIP	Bitlis Platform
BNR	Blue Nile Rift
BoM	Bolkar Basin
BoP	Bosniac Margin
BoP	Bolkar Platform
BO	Bent Ocean
CAC	Central Anatolian Block
CaB	Carpathian Basin
CaB	Carpathian High
CaB	Chu Sarysu Basin
CIP	Central Iranian Platform
CKP	Central Karakum Platform
CMM	Central Mountain Platform
CMP	Central Pamir Platform
CPP	Central Pontides Platform
CPT	Central Pamir Terrane
CB	Chott Basin
CUM	Central Uralian Massif
Cya	Cynaica Arch
DmM	Dobrogea Massif
DH	Dhorar High
DnB	Daikla Basin
DnB	Darror Basin
DzP	Dzula Platform
EBR	Eastern Black-Sea Rift
EEP	East European Platform
EFB	East Fergana Basin
FHB	El Houarid Basin
EPP	Eastern Pontides Platform
EP	Eratosthenes Platform
FRB	Farah Rud Basin
GarB	Garara Basin
GCB	Greater Caucasus Basin
GdB	Gardafu Basin
GeP	Geckik Platform
GTP	Gavrovo-Tripolizza Platform
GurP	Gurum Platform
GVA	Gangdese Volcanic Arc
HaB	Hawassia Basin
HaP	Hadim Platform
HaT	Hameimat Trough
HKR	Hindu Kush Range
IB	Ili Basin
IS	Indian Shield
IonB	Ionian Basin
IsB	Istanbul Block
JaB	Jaisalmer Basin
JAR	Junggar Altai Range
JIB	Jeffara Basin
JgB	Junggar Basin
JB	Jiza Qianar Basin
KaB	Kabul Block
KBB	Kandahar Back-Arc Basin
KbB	Kuban Basin
KBP	Kara-Bogaz Platform
KCP	Karaborum Chios Platform
KDB	Kopet Dagh Basin
KMB	Kermanshah Basin
KP	Kebaran Platform
KiB	Kufra Basin
KiB	Khuzestan Basin
KH	Khleissia High
KKT	Karakoram Terrane
KIS	Karakoram Volcanic Arc
KIS	Kunlun Shan
KoM	Karkinit Rift
KoM	Kocali Margin
KoB	Kuqa Basin
KVA	Kandahar Volcanic Arc
KyP	Kyrenaia Platform
KzB	Kizilca Basin
LeP	Levant Plateau
LeT	Levant Basin
LIT	Lhasa Terrane
LmE	Lamu Embayment
LmB	Lurestan Basin
LUP	Lut Platform
LyB	Lycian Basin
MaH	Mardin High
MaP	Malaya Platform
McM	Malacc Margin
MeB	Melut Basin
MeP	Menderes Platform
MdP	Mudagh Basin
MH	Mahfid High
MIP	Misaf Platform
MmG	Marmara Graben
MoP	Moesian Platform
MsB	Misrath Basin
ME	Malta Escarpment
MaP	Malta Platform
MuP	Munzur Platform
MwB	Moscow Basin
MzB	Murzuk Basin
NEP	Neyriz Exotics Platform
NoB	Nogal Basin
NSB	North Sinai Basins
Nso	North Somali Basin
NuS	Nubian Shield
OgB	Ogaden Basin
OmP	Oman Platform
PaB	Palmyra Basin
PaR	Palmyra Ridge
PCB	Pre-Caspian Basin
PEG	Proto-Euphrates Graben
PeH	Pelagonian High
PgP	Pelagian Platform
PiB	Pichakun Basin
PIO	Proto Indian Ocean
PKP	Parnass-Kona Platform
PmB	Pamir Basin
PnB	Pomeranian Basin
POB	Pindos-Oros Basin
PoT	Polish Trough
QKB	Quliqua-Khwakurk Basin
QTM	Qiang Tang Massif
RHM	Rhodopes Massif
RK	Rub'Al Khali Basin
RTH	Rayan Thunya High
RuH	Rutbah High
SAB	South Armenian Platform
SAP	Saharin Platform
SAB	South Caspian Basin
ScB	Szczecin Basin
ScP	Socotran Platform
SGB	Songpan-Gafo Basin
SHF	Shatsky Platform
SIR	Sistan Rift
SIT	Sirt Trough
SJM	Strandja Massif
SKV	Somkheto-Karabakh Volcanic Arc
SMM	South Moesian Massif
SMP	Serbo-Macedonian Platform
SoB	Somalia Coastal Basin
SPR	Sinop Rift
SPT	South Pamir Terrane
SQP	South Qiang Tang Platform
SPP	Sannagid-Sigiran Platform
STB	South Turpan Basin
SVH	Stavropol High
SyB	Syrdarya Basin
SyP	Syrtian Platform
SzR	Sabzevar Rift
TaB	Tarim Basin
TaH	Tatarian High
TaP	Tabas Platform
TCP	Trans-Caucasus Platform
TQH	Tarfun Kena High
TTP	Troodos Platform
TSA	Tibesti Sirt Arch
TSM	Tien Shan Massif
TUN	Tunisian Trough
TVM	Tavcanli Margin
UAB	Ukrainian Shield
UaB	Umar Margin
UaB	Ustyurt Basin
UoM	Voronozh Massif
WBR	Western Black-Sea Rift
WNR	White Nile Rift
WSB	West Siberian Basin
WwB	Warsaw Basin
XzB	Xigaze Forearc Basin
YaP	Yazd Platform
Yab	Yanzhuig Back-Arc Basin
ZaB	Zaysan Basin
CAZ	Central African Shear Zone

FORMATIONS			
ABF	Abu Ballas Formation	GeG	Gevaran Group
ABF	Abu Ballas Formation	GgF	Gilgibit Formation
Abn	Arabian Formation	GfF	Gilgibit Formation
AgA	Abu Gabra Formation	GIS	Gulanyi Series
Agb	Agbula Suite	GoU	Gogol Unit
AgY	Abu Gogier Formation	Grh	Gorahi Formation
AkK	Akkaya Formation	Hat	Hatia Formation
AmA	Ambo Arado Formation	HdM	Hedbergellen Marl
AnF	Alamain Formation	Hrh	Harshiyat Formation
AgF	Agil Formation	Hug	Hugli Formation
BeF	Becham Formation	HwF	Huwari Formation
BHS	Bahri Sandstones	HyB	Hybla Formation
BIS	Bisitoun Limestone	InM	Inonu Marble
BJF	Bob Jannah Formation	IPF	Inpiri Formation
BmF	Bolamba Formation	JiB	Jiabula Formation
BGS	Boyal group	JkF	Jikri Formation
BTC	Bituminous Shale	JfF	Jarash Formation
BUC	Bucegi Conglomerate	JzF	Jezzine Formation
ByF	Byadh Formation	KbS	Kubinsky Series
Byy	Bozaya Formation	KcF	Karachev Formation
CoF	Cogloyan Formation	KeR	Kermanshah Radiolarites
CeU	Cerityayasi Unit	KgS	Khanagah Suite
CmC	Camilk Carbonate	KhG	Kahmah Group
CoF	Cotton Formation	KiF	Kilimi Formation
CqF	Chaqila Formation	KiK	Kikla Formation
CuF	Chumulong Formation	KiU	Kizilca Unit
DgS	Dgnali Suite	KkZ	Karakuz Formation
DrF	Daryan Formation	KiG	Kazilesu Group
Dnt	Douiret Formation	KiK	Kalakek Formation
Duo	Duan Formation	KiS	Khingil Series
DyF	Daryanah Formation	Kly	Kaloyta Formation
Dzu	Denizipinar Unit	Kmc	Kumachadin Series
Fou	Fannaj Unit	KsS	Kayon Series
GoF	Gokbar Formation	KuB	Kuyub Series
Gar	Garou Formation	Koy	Koyun Formation
Gar	Garbarre Formation	kps	Kapushalling Group
GBS	Green Beds Series	KVC	Kandahar Volcanic Complex
KwF	Kabow Formation	SbR	Soulbest Radiolarites
LbF	Ladobai Formation	SfF	Sarchesneh Formation
LeB	Lebanon Formation	SbB	Sekker Formation
LfH	Lahn Formation	SgZ	Sagiz Formation
Lnf	Langshan Formation	SHF	Saint Hilorien Formation
Mes	Masi Formation	SHL	Shabel Formation
MEB	Merbah El-Afar Formation	MEB	Merbah El-Afar Formation
Mes	Messak Formation	SNG	Sangri Group
MIM	Milas Marble	SoL	Sogukam Limestone
MIF	Malha Formation	Srd	Serdj Formation
MmG	Musandam Group	SfF	Sif Formation
Mng	Mangang Formation	SVG	Sinjyan Volcanic Group
Mog	Mogino Formation	Taf	Taf Formation
MsU	Maskan Unit	ToS	Towlah Series
Mh	Mustahil Formation	Tch	Tchangest Formation
Mul	Munzur Limestone	TsS	Tetrahiti Suite
Muy	Muyan Formation	Tkn	Tokena Formation
Ndf	Nadan Formation	TnF	Telamin Formation
NuS	Nubian Sandstones	Tra	Trambesh Formation
NwF	Naxos Formation	NwF	Naxos Formation
Obl	Orbolino Limestones	TuG	Tugulu Group
Oif	Orbata Formation	TyV	Tayasi Volcanics
PaS	Palmyra Sandstones	TzF	Tizkuh Formation
PiR	Pichakun Radiolarites	Uif	Ulus Formation
Piv	Pirou Formation	VlL	Vigla Limestones
VoU	Volcaniclastic Unit	VsF	Veseloje Formation
Qhf	Qahash Formation	WqF	Wahrah Formation
Qmf	Qamchuqa Formation	WqF	Wahrah Formation
Qsh	Qashien Formation	WqF	Wahrah Formation
Qsh	Qashien Formation	XG	Xigaze Group
Qur	Quliqua Radiolarite	Yes	Yesomma Sandstone
RAF	Risan Anizeto Formation	Yuf	Yuduo Formation
RuS	Ruse Formation	ZaB	Zabai Formation
RuB	Rutbah Sandstone	ZyF	Zeybig Formation
SaF	Sha'iba Formation	ZzF	Zortash Formation
Sar	Sari Formation	ZwF	Zawawulong Formation
Saw	Sawagij Formation		



- LITHOLOGY -

- CONTINENTAL -

- Not interpreted
- Exposed land - no deposition
- High/moderate mountains (observed mountain range)
- Low mountain and plateau
- Lowland erosional plain
- Fluvio-lacustrine, Alluvial plain
- Large scale lacustrine deposits
- Continental molasse - Intra-mountainous basin deposits
- Flooded lowland/Marginal marine Coastal plain/Shallow mixed shelf
- Deltaic - Fan
- Hypersaline - Evaporites
- Evaporitic carbonate/clastic shelf

- TRANSITIONAL -

- Continental molasse - Intra-mountainous basin deposits
- Flooded lowland/Marginal marine Coastal plain/Shallow mixed shelf
- Deltaic - Fan
- Hypersaline - Evaporites
- Evaporitic carbonate/clastic shelf

- VOLCANISM -

- Undifferentiated volcanics
- Volcanics: Continental
- Volcanics: Shallow marine
- Volcanics: Deeper marine

- MARINE -

- Platform - shallow shelf
- Reef platform - Carbonate build-up
- Carbonate platform
- Terrigenous platform Coarse & fine clastics
- DEEPER SHELF - SLOPE - BASIN
- Slope/basinal deeper marine carbonates
- Slope/basinal deeper marine clastics
- Radiolites - Siliceous sedimentary rocks
- DEEP MARINE
- Deep marine sediments
- Sediment influx

- TECTONIC ELEMENTS -

- Accretionary complex
- Tectonic melange
- Active submarine ridge - Little or no deposition

- OCEANIC DOMAIN -

- Active subduction zone
- Inferred active subduction zone
- Active oceanic spreading center and transform
- Inferred active oceanic spreading center and transform
- Oceanic/continental crust boundary (observed and inferred)

- CONTINENTAL DOMAIN -

- Major strike-slip/vench fault
- Major normal fault
- Detachment, low angle normal fault
- Major anticlinal axis
- Major syndinal axis

- SUBSIDENCE -

- Active extensional tectonic subsidence
- Passive thermal subsidence (post-rift)
- Flexural subsidence: flexural basin
- Flexural subsidence: foredeep
- Flexural uplift: forebulge

- PALEOSTRESS -

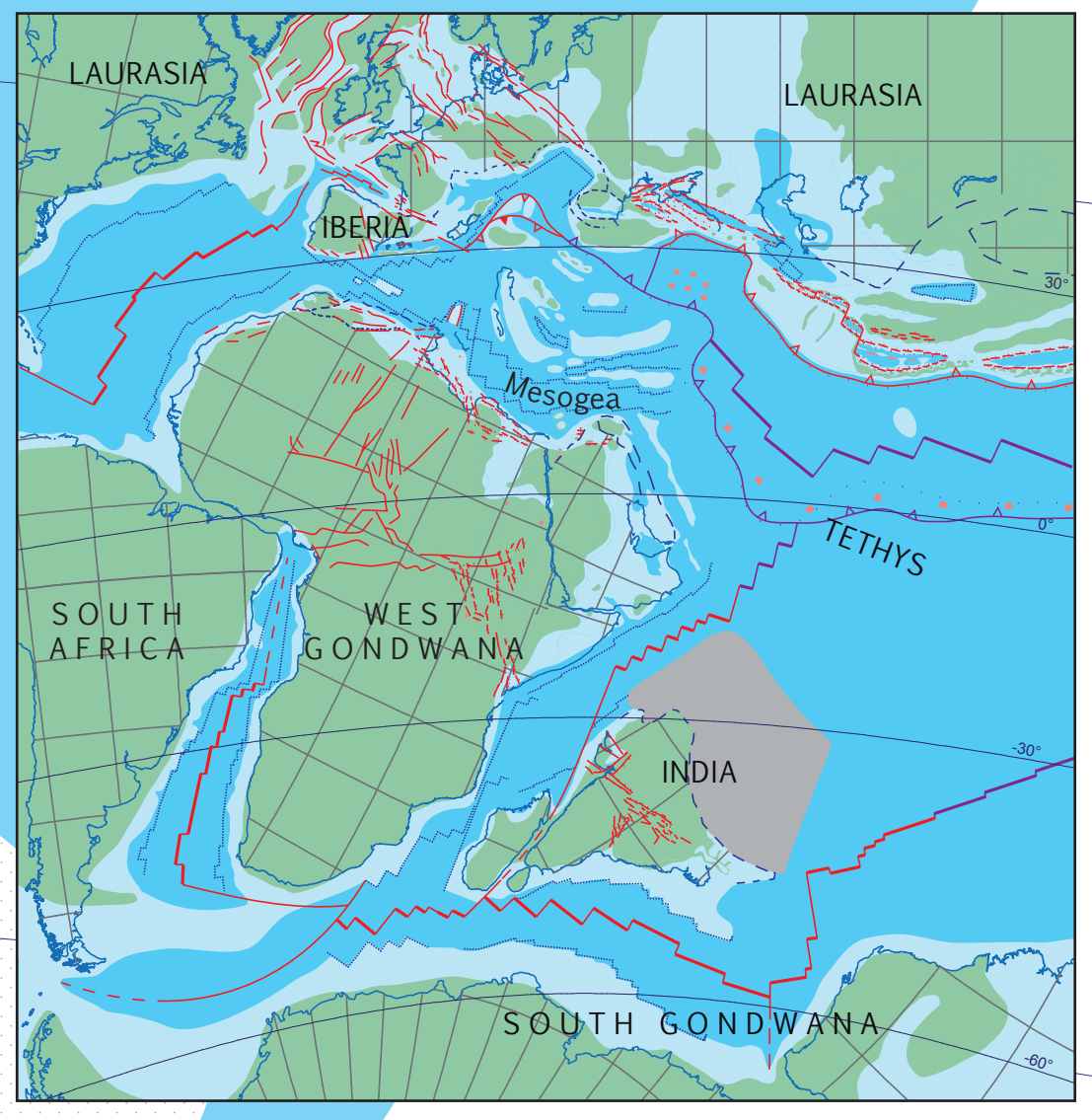
- Extensional regime
- Strike-slip regime
- Compressional regime

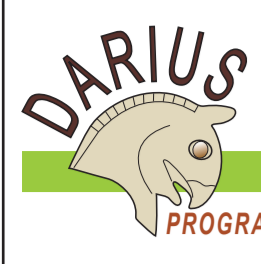
- KINEMATICS -

- Africa/Eurasia relative motion in cm/year
- India/Eurasia relative motion in cm/year
- Arabia/Eurasia relative motion in cm/year
- India/Africa relative motion in cm/year

- PALEO GEOGRAPHY -

- Present-day coastlines
- Paleoequator and Paleolatitudes (15° grid)
- Present-day 5° grid
- Paleoboundaries





PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

TURONIAN (93.9 - 89.8 Ma)

Map 10

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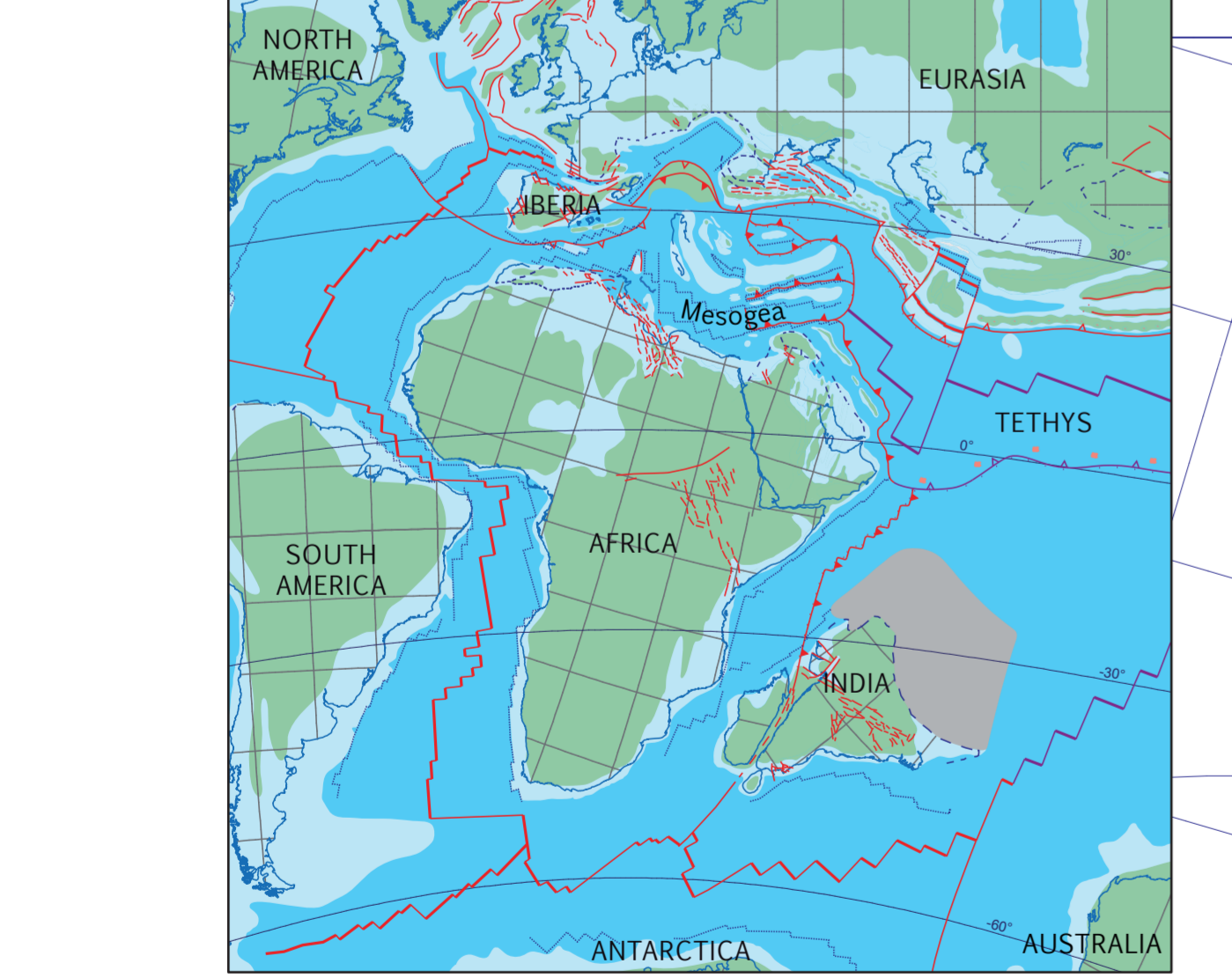
Equatorial scale: 1/15 000 000



Paleoreconstruction: 92 Ma, Eurasia fixed 0 km 500 km 1000 km Projection: Mercator, Ellipsoid: WGS84



DOMAINS			
AAA	Al Aawayn Arch	Hab	Hawassa Basin
ABM	Aborzi Margin	HafP	Hafnif Platform
ADB	Amu Darya Basin	HKR	Hindu Kush Range
AOP	Andrin Platform	HuG	Hun Graben
APF	Alyon Platform	IGN	Ignace-Guleman Ophiolite Nappes
AP	Alania Platform	IB	Ili Basin
AJT	Ajdabya Trough	IN	Indian Shield
ANG	Anza Graben	ION	Ionian Basin
AsP	Andrusov Platform	ION	Ionian-Ankara-Ercinjan Ophiolite Nappes
AQA	Al Qarraf Arch	IoB	Istanbul Block
AS	Arabian Shield	JaB	Jaisalmer Basin
ASB	Adelaziz-Sinjar Basin	JAR	Junggar Alatau Range
ATB	Afghan-Tadjik Basin	JgB	Junggar Basin
ATM	Antalya Margin	KaB	Kabul Basin
AN	Antalya Nappes	KBA	Kharuz-Burgan Anticline
AR	Alta Range	KBP	Kara Bogaz Platform
AvB	Avroman Bulge	KCB	Karakorum Chios Basin
AyB	Abyad Basin	KCP	Karakorum Chios Platform
AZG	Azraq Graben	KDB	Kopet Dag Basin
BAG	Bagana Basin	KeF	Kermanshah Flexural Basin
BAR	Bahr el Arab Rift	KeP	Keban Basin
BBC	Bukhara Chardzhou Step	KIB	Kufra Basin
BCS	Bahadag Basin	KHM	Khlesissa High
BOP	Bey Dagani Platform	KKT	Karakoram Terrane
BgB	Burgas Basin	KKA	Karakoram Volcanic Arc
BHB	Bohemian Basin	KIS	Kunlun Shan
BHM	Bohemian Massif	KKf	Karkant Rift
BB	Bisitoun Bulge	KqB	Kuqa Basin
BKO	Baer Bassin - Kizildag Ophiolite Nappe	KyP	Kyrenia Platform
BIP	Bites Platform	KzB	Kozak Basin
BNR	Blue Nile Rift	KzP	Kazakh Plateau
BoB	Bolkar Basin	LbL	Lublin Basin
BoM	Bosnia Margin	LeB	Levant Basin
BoP	Bolkar Platform	LHT	Lhasa Terrane
CAB	Central Anatolian Block	LinE	Lamu Embayment
CaB	Carpathian Basin	LFB	Lurestan Basin
ChB	Chi Sarysu Basin	Luf	Lut Platform
CIP	Central Iranian Platform	LyB	Lycian Basin
CMM	Central Mountain Massif	MaB	Meslah Basin
CMP	Central Mountain Platform	MaG	Maradah Graben
CPP	Central Pontides Platform	MaH	Mardin High
CPT	Central Pamir Terrane	MaP	Malaya Platform
CIP	Crimean Platform	MaB	Malais-Margin
CMB	Central Sinai Basin	MdB	Muglad Basin
CUM	Central Uralian Massif	MdM	Mugodjar Massif
CyP	Cymenica Platform	MeB	Meiui Basin
DaP	Dahra Platform	MeP	Menderes Platform
DAT	Dor el Abd Trough	Mgt	Mangyshlak High
DM	Dobrogea Massif	MIB	Mirdagh Basin
DH	Dhofar High	MMB	Masqat-Musandam Bulge
DIB	Dakbla Basin	Mop	Moesian Basin
DnB	Dannor Basin	MsB	Misratin Basin
DZP	Dzirula Platform	ME	Malta Escarpment
EBR	Eastern Black-Sea Rift	MIP	Malta Platform
ECP	East European Platform	MuP	Munzur Platform
EFB	East Fergana Basin	MwT	Miechow Trough
EHT	Esfahan-Hamadan Trough	NB	Nain-Bart Basin
ENA	En Nala Anticline	NBB	Nain-Bart Basin
EPP	Eastern Pontides Platform	NEB	Neyriz Exotic Bulge
ERF	Eratosthenes Platform	NIB	Niba Basin
ERP	Eratosthenes Platform	Nob	Nogal Basin
EUG	Euphrates Graben	NON	Neyriz Ophiolites Nappe
FB	Farah Rud Basin	NuS	Nubian Shield
GaB	Gabes Basin	Nso	North Somali Basin
GCB	Greater Caucasus Basin	Nsp	North Sinai Platform
GB	Gartland Basin	OyB	Opiros Basin
GeP	Gedik Platform	PaB	Palmyra Basin
GTB	Gangdise Thrust Belt	PCB	Pre-Caspian Basin
GTP	Garnoro-Tripolizza Platform		
GUR	Gurum Platform		
GVA	Gangdise Volcanic Arc		



FORMATIONS			
ABn	Al Banyah Formation	Dou	Douleb Formation
Abn	Abu Ali Formation	Dirk	Derekoy Formation
Abz	Abdera Formation	DvF	Dvnyokoyevy Formation
AHi	Al Hilal Formation	DU	Denizpınarı Unit
Aleg	Aleg Formation	EfF	Etef Formation
Am	Amerillo Formation	FaR	Fanua Radiolarites
ARF	Abu Roash Formation	FaU	Fanuj Unit
Arg	Argub Formation	GoF	Golhaik Formation
Arm	Ariano Formation	Gat	Gattar Formation
ArS	Ambar Sandstone	GBS	Green Beds Series
Aud	Audla Formation	Gir	Gira Formation
BnF	Banabala Formation	GIF	Golhaik Formation
BuF	Bina Formation	Gng	Gangbo Formation
Bk	Birk Unit	Gu	Gokgol Unit
Bsh	Bashjiqike Formation	GvG	Grudovo Group
CC	Centiylosi Unit	HuG	Hug Formation
ChF	Chilus Formation	HuG	Hug Formation
CnC	Camlık Carbonate	HilB	Halabat Formation
Dbr	Debarsu Formation	HSM	Halowinia Siliceous Marl
DeF	Derere Formation	Hug	Hug Formation
Der	Deru Formation	IaF	Iancica Formation
DG	Darfur Group	JiF	Jeiera Formation
Dli	Daliya Formation	JiF	Jingzhushan Formation
Dng	Donggou Formation	Ken	Kendykube Formation
KeR	Kermanshah Radiolarites	KfF	Kilif Formation
Kha	Khasab Formation	KuL	Kuzilka Unit
Kk	Kukebai Formation	Kk	Kukebai Formation
KIS	Khingil Series	KIS	Khingil Series
Kns	Kemcoy Suite	Kns	Kemcoy Suite
Kom	Komatan Formation	Kom	Komatan Formation
KoU	Koycegiz Unit	KoU	Koycegiz Unit
Kum	Kumluca Formation	Kum	Kumluca Formation
Kuz	Kuznetsov Formation	Kuz	Kuznetsov Formation
Laf	Lafana Formation	Laf	Lafana Formation
Lah	Lahnu Formation	Lah	Lahnu Formation
Lmu	Lower Mugjar Unit	Lmu	Lower Mugjar Unit
Man	Mansur Formation	Man	Mansur Formation
Mid	Midriff Formation	Mid	Midriff Formation
MiM	Milas Marble	MiM	Milas Marble
MkF	Mukalla Formation	MkF	Mukalla Formation
MkH	Mokhbas Formation	MkH	Mokhbas Formation
Mnk	Monksonghe Formation	Mnk	Monksonghe Formation
MnS	Margalitskhevi Formation	MnS	Margalitskhevi Formation
Mti	Muti Formation	Mti	Muti Formation
Mul	Munzur Limestone	Mul	Munzur Limestone
Muz	Muzrabod Formation	Muz	Muzrabod Formation
MvS	Mtavarı Suite	MvS	Mtavarı Suite
Nay	Nayid Formation	Nay	Nayid Formation
NIS	Niyallog Suite	NIS	Niyallog Suite
NuS	Nubian Sandstones	NuS	Nubian Sandstones
Nax	Naxar Formation	Nax	Naxar Formation
Per	Perapeli Formation	Per	Perapeli Formation
Pik	Pichakon Radiolarites	Pik	Pichakon Radiolarites
Pin	Pindas Radiolarites	Pin	Pindas Radiolarites
PR	Pushite Rugh Series	PR	Pushite Rugh Series
Qaf	Qitqawt Formation	Qaf	Qitqawt Formation
QTF	Qazi Toqtaghinsh Formation	QTF	Qazi Toqtaghinsh Formation
Qua	Quanyagou Formation	Qua	Quanyagou Formation
QuF	Qumayrah Formation	QuF	Qumayrah Formation
QuR	Qulqula Radiolarite	QuR	Qulqula Radiolarite
RuF	Red Limestone Formation	RuF	Red Limestone Formation
SaF	Saint Hilaron Formation	SaF	Saint Hilaron Formation
Sni	Smirna Formation	Sni	Smirna Formation
Soh	Sohlde Formation	Soh	Sohlde Formation
Srt	Sarata Formation	Srt	Sarata Formation
Sng	Sinjian Volcanic Group	Sng	Sinjian Volcanic Group
SwF	Sarwak Formation	SwF	Sarwak Formation
Sx	Shexing Formation	Sx	Shexing Formation
ToS	Tawilah Series	ToS	Tawilah Series
Tif	Taref Formation	Tif	Taref Formation
Tkn	Takena Formation	Tkn	Takena Formation
UOF	Um Omied Formation	UOF	Um Omied Formation
VaG	Varshilo Group	VaG	Varshilo Group
VDF	Valea Dreptului Formation	VDF	Valea Dreptului Formation
Vil	Vigla Limestones	Vil	Vigla Limestones
Ven	Venchan Formation	Ven	Venchan Formation
VW	Voronezh Formation	VW	Voronezh Formation
Waf	Wadidi As Sir Formation	Waf	Wadidi As Sir Formation
Wat	Wato Formation	Wat	Wato Formation
Weg	Weglinic Formation	Weg	Weglinic Formation
XG	Xigaze Group	XG	Xigaze Group
Yeg	Yemislizay Formation	Yeg	Yemislizay Formation
Yeg	Yengisar Group	Yeg	Yengisar Group
Yes	Yesomma Sandstone	Yes	Yesomma Sandstone
Yig	Yingjisha Group	Yig	Yingjisha Group
YvF	Yolovca Formation	YvF	Yolovca Formation
ZbF	Zebbog Formation	ZbF	Zebbog Formation
Zng	Zongzo Formation	Zng	Zongzo Formation

- LITHOLOGY -

- CONTINENTAL -

- Not interpreted
- Exposed land - no deposition
- High-moderate mountains
- Low mountain and plateau
- Lowland erosional plain
- Fluvio-lacustrine, Alluvial plain
- Large scale lacustrine deposits
- Continental molasse - Intracontinental basin deposits
- Flooded lowland/Marginal marine
- Coastal plain/Shallow mixed shelf
- Deltaic - Fan
- Hypersaline - Evaporites
- Evaporitic carbonate/clastic shelf

- VOLCANISM -

- Undifferentiated volcanics
- Volcaniclastics: Continental
- Volcaniclastics: Shallow marine
- Volcaniclastics: Deeper marine

- MARINE -

PLATFORM - SHALLOW SHELF

- Carbonate platform
- Reef platform - Carbonate build-up
- Terrigenous platform
- Coarse & fine clastics

DEEPER SHELF - SLOPE - BASIN

- Slope/basinal deeper marine carbonates
- Slope/basinal deeper marine clastics
- Radiolarians - Siliceous sedimentary rocks
- DEEP MARINE
- Deep marine sediments

- SYMBOL -

- Sediment influx

- TECTONIC ELEMENTS -

- Accretionary complex
- Tectonic melange
- Active submarine ridge - Little or no deposition
- Active extensional tectonic subsidence
- Passive thermal subsidence (post-rift)
- Flexural subsidence: flexural basin
- Flexural subsidence: foredeep (observed and inferred)
- Flexural uplift: forebulge

- OCEANIC DOMAIN -

- Active subduction zone
- Inferred active subduction zone
- Active oceanic spreading center and transform
- Inferred active oceanic spreading center and transform
- Oceanic/continental crust boundary (observed and inferred)

- SUBSIDENCE -

- Major strike-slip/vench fault
- Strike-slip regime
- Major normal fault
- Detachment, low angle normal fault
- Major anticlinal axis
- Major syndinal axis
- Major thrust fault
- Major normal fault
- Detachment, low angle normal fault
- Major anticlinal axis
- Major syndinal axis

- PALEOSTRESS -

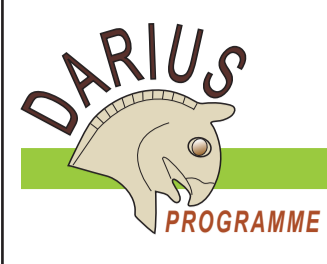
- Extensional regime
- Strike-slip regime
- Compressional regime

- KINEMATICS -

- Africa/Eurasia relative motion in cmyear
- Arabia/Eurasia relative motion in cmyear
- India/Eurasia relative motion in cmyear
- India/Africa relative motion in cmyear

- PALEO GEOGRAPHY -

- Present-day coastlines
- Paleoequator and Paleolatitudes (15° grid)
- Present-day 5° grid
- Paleoblock boundaries



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

EARLY CAMPANIAN

(83.6 - 78 Ma)

Map 11

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

Contributors: ANGIOLINI L., KAVEH F., PLUNDER A., POISSON A., POURTEAU A., ROBERTSON A., SHEKAWAT R., SOSSON M., ZANCHI A.

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Equatorial scale: 1/15 000 000

Paleoreconstruction: 82 Ma, Eurasia fixed 0 km 500 km 1000 km Projection: Mercator, Ellipsoid: WGS84



DOMAINS	
AAA	Al Awaynat Arch
ABM	Alborz Margin
ADB	Amu Darya Basin
AJR	Andinn Range
AH	Alania High
AJT	Ajdabiya Trough
ANG	Anza Graben
ANR	Andrusov Ridge
AP	Apulian Platform
ARS	Arabian Shield
ASB	Adelazi-Singer Basin
ATB	Afghan-Tadjik Basin
ATL	Antalya Basin
ATN	Antalya Nappe
AUR	Altai Range
ATT	Achra-Tralet Trough
AVN	Avroman Nappe
AYB	Abyad Basin
AZG	Azraq Graben
BAB	Bagarra Basin
BAR	Bahr el Aral Rift
BCC	Bukhara Chardzhou Step
BDB	Babadag Basin
BDP	Bey Daglan Platform
BEG	Berbera Graben
BGB	Burgas Basin
BHB	Bohemian Basin
BHM	Bohemian Massif
BKN	Bisitoun-Khemansha Nappe
BKO	Baer Basot - Kizildag Ophiolite Nappe
BIB	Balkhash Basin
BIR	Bitlis Range
BNR	Blue Nile Rift
BOB	Bolkar Basin
BOA	Bosniac Margin
BYC	Bayanbulak Basin
CBP	Carpathian Basin
CAC	Central Anatolian Complex
CHB	Chu Sarysu Basin
CIP	Central Iranian Platform
CMC	Central Mountain Massif
CMP	Central Mountain Platform
CPP	Central Parides Platform
CPT	Central Pamir Terrane
CSB	Central Sinai Basin
CUM	Central Uralian Massif
CYP	Cyrenaica Platform
DAp	Dahra Platform
DAT	Dor el Abid Trough
DM	Dobrogea Massif
DH	Dhofar High
DIB	Dakhla Basin
DIG	Damir Graben
DZP	Dzirula Platform
EBB	Eastern Black-Sea Basin
EEP	East European Platform
EFB	East Fergana Basin
EHT	Esfahan-Hamadan Trough
EPP	Eastern Pontides Platform
ERP	Eratosthenes Platform
ESH	East Sudetic High
EUG	Euphrates Graben
FaF	Fars Foredeep Basin
FRB	Farah Rud Basin
GAB	Gabes Basin
GCB	Greater Caucasus Basin
GAG	Gardafui Graben
GP	Gedik Platform
GTP	Gangdese Thrust Belt
GUP	Gurum Platform
GVA	Gangdese Volcanic Arc
HAP	Hadim Platform
HCB	Holly Cross Mountain Belt
HKR	Hindu Kush Range
HUG	Hun Graben
IGN	Ispidere-Guleman Ophiolite Nappes
IB	Ily Basin
INS	Indian Shield
ION	Ionian Basin
ION	Izmir-Ankara-Ercinjan Ophiolite Nappes
ISB	Istanbul Block
JAR	Junggar Altai Range
JBB	Jejjara Basin
JGB	Junggar Basin
KAB	Kabul Block
KBP	Kara-Bogaz Platform
KCB	Karaborum Chos Basin
KDB	Koet Dagli Basin
KIB	Kufra Basin
KHH	Kheissia High
KKT	Karakoram Terrane
KKV	Karakoram Volcanic Arc
KIS	Kurilun Shan
KKB	Karakul Basin
KON	Koy Ophiolite Nappe
KOV	Kohistan Volcanic Arc
KQB	Kuqa Basin
KRB	Kirkuk Basin
KYB	Kyrenia Range
KZB	Kizilca Basin
KZP	Kazakh Plateau
Lah	Lausitz High
LBB	Lublin Basin
LeB	Levant Basin
LNT	Lhassa Terrane
LKB	Lekhwar Bulge
LNE	Lamu Embayment
LNF	Lurestan Foredeep Basin
LUP	Lut Platform
LNT	Central Iranian Platform
LNF	Lurestan Foredeep Basin
LUT	Lut Platform
LYB	Lycian Basin
MaB	Maslah Basin
MaG	Maradah Graben
MaH	Mardin High
MaR	Malaya Range
McM	Maliac Margin
MOB	Muglad Basin
MM	Mugdyar Massif
MEB	Melut Basin
MEP	Menderes Platform
MgH	Mangyshkai High
MHB	Mudugh Basin
MOP	Moesian Platform
MIB	Misratin Basin
ME	Malta Escarpment
MaP	Malta Platform
MuB	Muhsin Basin
MWt	Micthoa Trough
MeB	Murzuk Basin
NBB	Nain-Bart Basin
NIF	Nif
NOG	Nogal Graben
NON	Neyriz Ophiolite Nappe
NSO	North Somali Basin
NSP	North Sinai Platform
NUS	Nubian Shield
OAS	Odessa Shelf
PaB	Palmyra Basin
PcB	Pt-Caspian Basin
PeP	Pelagonian Platform
PpP	Pelagian Platform
PCH	Pichalun Nappe
PIO	Proto Indian Ocean
PKP	Parnas-Kiona Platform
PMB	Pontides Magmatic Arc
PmB	Pamir Basin
PmB	Pomeranian basin
PmB	Polish Anticlinorium
PmB	Prindos-Olonos Basin
PWN	Penween-Walash Ophiolite Nappe
QTP	Qiang Tang Plateau
RSM	Rhodope-Strandja Massif
RTH	Rayan Thaniya High
RUH	Rutbah High
SA	Seven-Akera Ophiolite Nappes
SAp	Saharan Platform
SaT	Sanandaj Trough
SCB	South Caspian Basin
SCB	Szczecin Basin
ScP	Socotran Platform
SCB	Sangan Ganu Basin
SHN	Sahneh-Harsin Ophiolites Nappe
SHP	Shatsky Platform
SIT	Sirt Trough
SoB	Somalia Coastal Basin
SON	Semal Ophiolites Nappe
SPT	South Pamir Terrane
SRB	Srednegero Rift Basin
SrB	Sirjan Basin
SsB	Sistan Basin
SCB	Suzan Ophiolite Nappe
SuF	Sunehah Foredeep Basin
SyB	Syndarya Basin
SCB	Scythian Platform
SCB	Szczecin Basin
TabB	Tabas Basin
TaB	Tarim Basin
TCP	Trans-Caucasus Volcanic Arc
TCV	Abu Tumanyan Trough
TmT	Tangero Foredeep Basin
TON	Troodos Ophiolite Nappe
TpB	Tripoli Basin
TSA	Tibesti Sirt Arch
TSM	Tien Shan Massif
TuS	Turgay Strait
UKS	Ukrainian Shield
USB	Ustyur Basin
VoM	Voronezh Massif
WBB	Western Black-Sea Basin
WDB	Western Desert Basins
WNR	White Nile Rift
WSB	West Siberian Basin
WuB	Warsaw Basin
XZB	Xizqize Forearc Basin
YaP	Yazd Platform
ZaB	Zayshan Basin
ZaT	Zailiah Trough

FORMATIONS	
AAF	Al Athrum Formation
Abd	Abiod Formation
ABF	Abushan Formation
AIF	Abusio Formation
AKF	Abtalh Formation
AlF	Al Majahir Formation
Ame	Amerillo Formation
AmF	Amerin Flysch
AmL	Atman Limestone
AS	Arsenjan Flysch
Aud	Audia Formation
AUF	Akuma Formation
BeF	Beyda Formation
BgG	Bourgas Group
BkF	Bekhme Formation
BIF	Beloka Formation
Bih	Balamin Formation
Bim	Baluman Formation
Brk	Birk Unit
Bya	Byala Formation
Ch	Chelka Formation
CM	Camlik Carbonate
CmC	Camlik Carbonate
Dng	Donggou Formation
Duk	Dukah Formation
Duu	Duyukornaya Formation
DwF	Duwai Formation
DZU	Denizpini Unit
EZF	Enschur Formation
EF	El Hefuf Formation
EHS	Eshmakikhevi Suite
EmF	Emine Flysch
ERF	Erek Formation
EIL	Erymanthos Limestone
EZF	Ein Zetim Formation
FaF	Fiqa Formation
Fou	Fanniy Unit
FaF	Fazsi Formation
GBS	Green Beds Series
Gir	Gira Formation
GoU	Gokgol Unit
GpF	Gurpi Formation
Gif	Gisraka Formation
GRG	Grudova Group
Guc	Gucheng Formation
Guf	Gumburo Formation
HoC	Havovina Complex
Haf	Haftaman Formation
HF	Hartha Formation
HuF	Hamza Formation
JuF	Jingzhushan Formation
JuF	Jeweiso Formation
KIU	Kialca Unit
Kkt	Karakata Formation
Kmf	Khaman Formation
KNS	Kuzumakhta Suite
KF	Kastel Formation
Kv	Kostrov Formation
KvF	Kannoviu Formation
KZ	Karabogaz Formation
Lbf	Lahnu Formation
LMU	Lower Muggar Unit
Mak	Markha Formation
Man	Mansur Formation
Mel	Melut Formation
MIG	Michurin Group
MIM	Milas Marble
Miz	Mizdah Formation
MkF	Mukalla Formation
MLS	Massive Limestone Series
Mnk	Mankuanghe Formation
Msh	Mishosh Formation
MtF	Mtavarri Formation
Muk	Mukawar Formation
MvS	Mtavari Suite
NIF	Nikopol Formation
NUS	Nubian Sandstones
NyS	Noyas Series
OmF	Osmanniye Formation
Pes	Pestrotsvetny Formation
PLF	Pelagic Limestone Formation
PSS	Pire Salza Series
QesF	Queset Formation
QIF	Qahlah Formation
RAC	Ratak Accretionary Complex
RBF	Rybnik Flysch
RfF	Rachnot Formation
RLF	Red Limestone Formation
RIF	Rullat Formation
RMF	R'Mah Formation
Sam	Samban Formation
SaF	Saymeh Formation
SES	Sabzevar Extensive Sequence
SHF	Saint Hilorien Formation
SHF	Shirvan Formation
SIS	Syrt Shale
Smi	Smirna Formation
SrS	Sardakharian Suite
Sit	Sarota Formation
SVG	Sijirni Volcanic Group
SvF	Shaving Formation
Tag	Tagrifat Formation
ToS	Tawilah Series
TaF	Tarbur Formation
TJF	Tanjera Flysch
Tkn	Takona Formation
Tuk	Tukrah Formation
TuF	Tawrah Formation
UnF	Unireq Formation
Vil	Vigla Limestones
Xig	Xigaze Group
Yef	Yemilicay Formation
Yng	Yangsar Group
Yes	Yesomina Sandstone
Yig	Yingjisha Group
Yif	Yaparakli Formation
Yus	Yusudag Suite
YyF	Yaylayay Formation
Zng	Zongshan Formation
Znz	Zongzu Formation



- LITHOLOGY -

- CONTINENTAL -

- EXPOSED LAND - NO DEPOSITION
- High-moderate mountains
- Active mountain range
- Low mountain and plateau
- Lowland erosional plain
- Fluvio-lacustrine, Alluvial plain
- Large scale lacustrine deposits
- Continental molasse - Intramontaneous basin deposits
- Platform - SHALLOW SHELF
- Reef platform - Carbonate build-up
- Carbonate platform
- Terrigenous platform
- Coarse & fine clastics
- DEEPER SHELF - SLOPE - BASIN
- Slope/Basinal deeper marine carbonates
- Slope/basinal deeper marine clastics
- Deltaic - Fan
- Hypersaline - Evaporites
- Evaporite carbonate/clastic shelf
- DEEP MARINE
- Deep marine sediments
- Sediment influx

- VOLCANISM -

- Undifferentiated volcanics
- Volcaniclastics: Continental
- Volcaniclastics: Shallow marine
- Volcaniclastics: Deeper marine

- TECTONIC ELEMENTS -

- OCEANIC DOMAIN -

- Active subduction zone
- Inferred active subduction zone
- Active oceanic spreading center and transform
- Inferred active oceanic spreading center and transform
- Oceanic/continental crust boundary (observed and inferred)

- CONTINENTAL DOMAIN -

- Major thrust fault
- Major strike-slip/wrench fault
- Major normal fault
- Detachment, low angle normal fault
- Major anticlinal axis
- Major syndinal axis

- SUBSIDENCE -

- Active extensional tectonic subsidence
- Passive thermal subsidence (post-rift)
- Flexural subsidence: flexural basin
- Flexural subsidence: foredeep
- Flexural uplift: forebulge (observed and inferred)

- PALEOSTRESS -

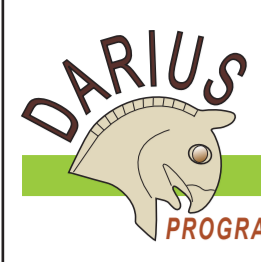
- Extensional regime
- Strike-slip regime
- Compressional regime

- KINEMATICS -

- Africa/Eurasia relative motion in cm/year
- India/Africa relative motion in cm/year
- India/Eurasia relative motion in cm/year

- PALEO GEOGRAPHY -

- Present-day coastlines
- Paleoequator and Paleolatitudes (15° grid)
- Present-day 5° grid
- Paleoblock boundaries



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

LATE MAASTRICHTIAN

(69 - 66.0 Ma)

Map 12

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

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Equatorial scale: 1/15 000 000

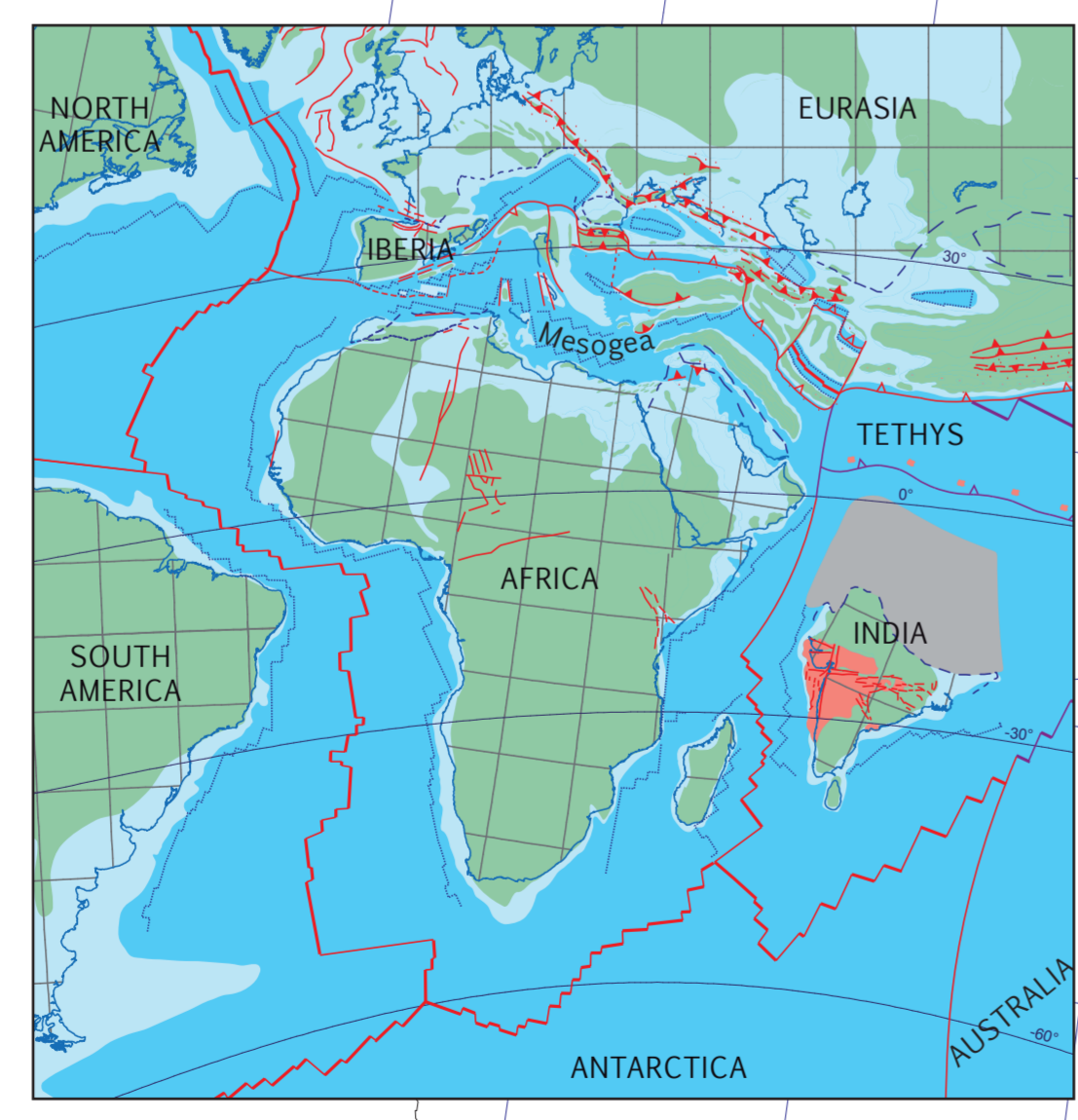
Paleoreconstruction: 67 Ma, Eurasia fixed 0 km 500 km 1000 km Projection: Mercator, Ellipsoid: WGS84



FORMATIONS			
AAF Al Athyrat Formation	Duk Dukakhi Formation	KmF Khaman Formation	RLF Red Limestone Formation
Abd Abiod Formation	DuJ Denziljini Unit	Kof Kofin Formation	SaF San Anthony Formation
AGh Al Ghaziyah Formation	EmF Emine Flysch	KVC Kerman Conglomerate	Sat Satul Formation
AGS Agburun Formation	EmH Emam Hassam Formation	KVv Kostrov Formation	Sbs Sebes Formation
AHf Al Hisa Formation	Erl Erymanthos Limestone	KvF Kiparissos Volcano Formation	SaF Sudr Formation
AJu Al Jurf Formation	Fak Farakhi Formation	Lep Lepso Formation	Sho Sharwayn Formation
ALG Amal Group	Fat Fayah Turbidite	LIG Linziang Group	SHF Shiranish Formation
Ane Anello Formation	FoU Fossil Unit	LIL Lindos Limestone	SHV Sheving Formation
AmF Amiran Flysch	Feg Fenghuashan Group	LLF Lower Lelkara Formation	Sim Simsimo Formation
Ant Antak Formation	Gof Ghareb Formation	LMU Lower Mugar Unit	Syr Syrt Shale
APB Ali Bai Bel Limestones	GrG Gira Formation	Mel Melut Formation	Str Stret Formation
Aqr Aqra Formation	GoF Gokgol Formation	Meg Megabreccias	Sym Sym Formation
Asp Asporoho Formation	GoU Gokgol Unit	MuF Mukalla Formation	ToS Towilah Series
Aur Aruma Formation	GpF Gurpi Formation	Mks Massive Limestone Series	Tar Tarbur Formation
Aur Aruma Formation	Gur Gurakku Formation	Mnk Mankuanghe Formation	TJF Tanjero Flysch
AvF Alkveren Formation	GvF German Formation	Msl Mslakutan Unit	TIS Tetriskuro Suite
Bar Baraka Formation	Har Harami Formation	Muk Mukawar Formation	Tuk Tukrah Formation
BgF Badgiri Formation	Iol Ionian Limestone	Mud Mudji Suite	TyF Tyarot Formation
BoF Barovans Flysch	ISM Isak Marls	Muw Muwaqar Formation	VeF Vetrila Formation
BRF Bardeh Formation	JIS Jikhwell Suite	Mvs Mtavari Suite	Wof Woback Formation
Brk Brk Unit	Jmb Joambar Series	NAC Neh Accretionary Complex	Wof Woodi Dukhan Formation
Bsf Besni Formation	Kbb Kababish Formation	Nhf Naslandeh Formation	WeM Wegierka Marl
Byo Byala Formation	Kbf Khaseeb Formation	Pes Pestrotsvetny Formation	Xig Xigaze Group
Cnu Cornu Formation	Kef Keçili Formation	Pks Pkhista Suite	Yes Yesomma Sandstone
Crp Cepandire Formation	Kf Kafari Formation	PLF Pelagic Limestone Formation	Yig Yingjicha Group
DaS Dakhla Shale	Kin Kinza Formation	Pm Polary Marls	YF Yaparaki Formation
DgF Digma Formation	KKF Kailaka Formation	Qbf Qubeyqa Formation	YyF Yaylagoyi Formation
Dnb Dongba Formation	Kkt Karakata Formation	Zng Zangshan Formation	Zz Zongzuo Formation
Dng Donggou Formation	KIF Kalash Formation	RAC Ratuk Accretionary Complex	Zz Zongzuo Formation

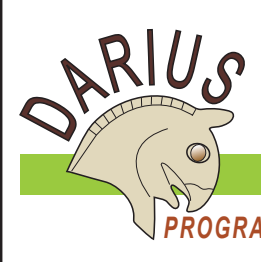
- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
- MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Terrigenous platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radioactive - Siliceous sedimentary rocks
 - DEEP MARINE
 - Deep marine sediments
- TRANSITIONAL -**
 - Flooded lowland/marginal marine
 - Coastal plain/shallow mixed shelf
 - Deltaic - Fan
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
- VOLCANISM -**
 - Undifferentiated volcanics
 - Volcaniclastics: Continental
 - Volcaniclastics: Shallow marine
 - Volcaniclastics: Deeper marine
- SYMBOL -**
 - Sediment influx
- TECTONIC ELEMENTS -**
 - Active submarine ridge - Little or no deposition
 - Active extensional tectonic subsidence
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
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- OCEANIC DOMAIN -**
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (observed and inferred)
- CONTINENTAL DOMAIN -**
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major anticlinal axis
 - Major syndinal axis
- SUBSIDENCE -**
 - Active extensional tectonic subsidence
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
 - Flexural uplift: forebulge
- PALEOStRESS -**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
- KINEMATICS -**
 - Africa/Eurasia relative motion in cm/year
 - Arabia/Eurasia relative motion in cm/year
 - India/Eurasia relative motion in cm/year
 - India/Africa relative motion in cm/year
- PALEOGEOGRAPHY -**
 - Present-day coastlines
 - Paleoequator and Paleolatitudes (1° grid)
 - Present-day 5° grid
 - Paleoblock boundaries



DOMAINS									
AAA Al Awaysat Arch	BaB Bagarra Basin	CUM Central Uralian Massif	EuB Euphrates Basin	JAA Jebel Al-Akhdar Anticline	KyM Kyrenia Massif	MeB Melut Basin	NuS Nubian Shield	SaP Saharan Platform	SyB Syrdarya Basin
ABD Amu Darya Basin	BbB Babadag Basin	CyP Cyrenaica Platform	FaB Fars Basin	JAR Junggar Alatau Range	KzP Kazakh Plateau	MgH Mangyshlak High	OmM Oman Mountains	SCB South Caspian Basin	SyF Scythian Platform
ADM Andrim Massif	BbP Bey Daglan Platform	Dbr Dobrogea Range	GdB Gandafan Basin	JHJ Jeffara High	LauL Lausitz High	MbB Murgush Basin	PaB Palmyra Basin	SCB Socccan Basin	SzF Sabzevar Foredeep Basin
AN Alania Nappe	BhB Boheman Basin	DcP Deccan Plateau	GP Gedik Platform	JBB Junggar Basin	LbB Lublin Basin	MmJ Marmarica Uplift	PcB Pre-Caspian Basin	SbB Socccan Platform	SzN Sabzevar Ophiolite Nappe
AJT Ajdabya Trough	Bhm Bohemian High	DDB Dnieper-Donets Basin	GTB Gangadese Thrust Belt	KaR Kattaniya Ridge	LcR Lesser Caucasus Range	MdB Menderes Basin	PbB Parnapor Basin	SbB Seifdabeh Basin	TaB Taimir Basin
BaB Anaks Basin	BIM Bitlis Massif	DhH Dhorar High	GTP Gavrovo-Tripolizza Platform	KaB Kara Bogaz Platform	LbT Lhassa Terrane	MpP Moesian Platform	PbB Pelagian Platform	SbB Srednogoze Fold-Belt	TbB Tabas Basin
AIB Alcapa Block	BmB Bitlis Massif	DzH Dzurula High	GuP Gurum Platform	KCB Karaborum Chos Basin	LhT Lhassa Terrane	ME Malta Escarpment	PmB Pamir Basin	SgP Songpan-Ganzi Plateau	TcR Trans-Caucasus Range
AF Alborz Fold Belt	CNB Blue Nile Basin	DzF Donbas Fold-Thrust Belt	GVA Gangadese Volcanic Arc	KDH Kopet Dagh High	LkT Luda Kamchia Trough	MpP Malta Platform	PmB Pomeranian Basin	ShP Shatsky Platform	TcV Trans-Caucasus Volcanic Arc
AnG Anza Graben	CAB Carpathian Basin	DzH Dzurula High	HCB Holly Cross Mountain Belt	KIB Kufra Basin	LmE Lamu Embayment	MbB Muti Basin	POA Polish Anticlinorium	SHR Salween-Hansin Range	TDB Tissa-Dacia Block
AnR Andrusid Ridge	CaB Carpathian Basin	DzH Dzurula High	HdB Hadim Basin	KKB Khasissia High	LbB Lurestan Basin	MwT Mieschow Trough	POB Pindos-Olonos Basin	SIT Sirt Trough	TnB Tangero Basin
AP Apulian Platform	CAC Central Anatolian Complex	EBB Eastern Black-Sea Basin	HKR Hindu Kush Range	KKT Karakoram Terrane	LbB Lut Block	MzB Murzuk Basin	PWR Perween-Walash Range	SbB Somalia Coastal Basin	TRR Trodos Ridge
AS Arabian Shield	ChB Chu Sarysu Basin	HyB Haymana Basin	HCB Holly Cross Mountain Belt	KKV Karakoram Volcanic Arc	LbB Lut Block	NBB Nain-Baft Basin	QTP Qiang Tang Plateau	SbB South Pamir Terrane	TSM Tien Shan Massif
ASR Abdehazir-Sinar Ridge	CP Central Iranian Platform	EBB Eastern Black-Sea Basin	ICR Ispendere-Guleman Ridge	KNS Kunlun Shan	LbB Lut Block	NBB Nain-Baft Basin	RNO Remnant Neo-Tethys Ocean	SbB Sajan Block	TuS Turgay Strait
ATB Afghan-Tadjik Basin	CMM Central Mountain Massif	EPP Eastern Pontides Platform	IBB Ili Basin	Knf Karinkint Fold-Thrust Belt	MmJ Marmarica Uplift	NoB Nogal Basin	RSM Rhodopes-Strandja Massif	SrB Sharab-Sheiba Ridge	UKS Ukrainian Shield
AH Antalya High	CMP Central Mountain Platform	ECM Ercinjan Massif	INS Indian Shield	Kov Kohistan Volcanic Arc	MaT Malatya Massif	NOR Noryz Ophiolites Range	RTH Rayan Thaniya High	SfS Sistan Foredeep Basin	UkS Ukyuruk Basin
AYB Atyad Basin	CPT Central Pontides Platform	EPF Ertatthoes Platform	IoB Ionian Basin	KqB Kurpa Basin	MaT Malatya Massif	NSF North Sinai Folds	RuH Rubath High	SfS Sistan Foredeep Basin	UkS Ukyuruk Basin
AZ Azraq Basin	CPT Central Pamir Terrane	ESH East Sudetic High	IsB Istanbul Block	Ksh Kasserine High	MdM Mugodjar Massif	NSO North Somali Basin	SAM Sevan-Akera Ophiolite Massif	SvB Sivas Basin	WbB Western Black-Sea Basin

FAULTS	
CBR Carlsberg Ridge	HRF Hari Rud Fault
MH Mid-Hungarian Line	OwT Owen Transform
TfT Timok Fault	



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

DANIAN

(66 - 61.6 Ma)

Map 13

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

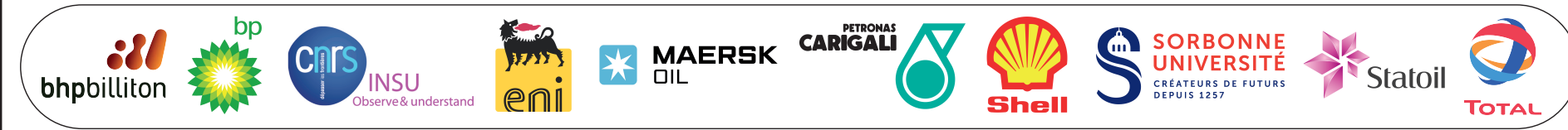
Contributors: ANGIOLINI L., KAVEH F., PLUNDER A., POISSON A., POURTEAU A., ROBERTSON A., SHEKAWAT R., SOSSON M., ZANCHI A.

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Equatorial scale: 1/15 000 000

Paleoreconstruction: 62 Ma, Eurasia fixed 0 km 500 km 1000 km Projection: Mercator, Ellipsoid: WGS84



FORMATIONS		
AaF Aaliji Formation	EmF Emine Flysch	KuG Kumageleimu Group
AbF Abyad Formation	ES ESna Shale	kuk Kuruk Formation
AeF Aertashi Formation	Faj Fajan Formation	LIG Linzong Group
Aju Al Jurf Formation	FaG Fenghuashan Group	LIL Lindos Limestone
Akd Akdzhir Formation	Gmh Garmeh Formation	LMU Lower Muggor Unit
Akf Allah Kaji Formation	GUU Gulgo Unit	Luh Luhe Formation
Aks Akshat Formation	Gra Garra Formation	Mal Malounda Formation
AlG Amal Group	GrF Gursaku Formation	MeF Medjar Formation
AmF Amiran Flysch	Gro Grovov Formation	Mko Murka Formation
Ant Antok Formation	Gun Gunshi Formation	Mib Muliibogai Formation
ApF Apollonia Formation	GvF Germav Formation	MLF Middle LeKha Formation
AsT Astara Formation	Hog Hagfah Formation	MLS Massive Limestone Series
Atb Atbasi Formation	HdF Hadriamout Formation	MSU Maskutan Unit
AUF Al Uwaylihi Formation	Hor Horqaz Formation	Nuk Mukawar Formation
Aur Aurada Formation	IKS Ikhidag Suite	Mut Muthymimih Formation
AvF Akveren Formation	IoL Iolani Limestone	Muw Muwaqqar Formation
BaG Bartang Suites	JcF Jichalo Formation	NAC Neh Accretionary Complex
BoF Bonovos Flysch	Joh Jahrum Formation	Nib Nibuoo Formation
BOM Bati Ophiolitic Melange	Jid Jidula Formation	ObF Obbia Formation
Bya Byala Formation	Jur Juratze Formation	PoF Pobdeh Formation
Chu Chupana Formation	KaS Kharga Shale	PgF Pesteligh Formation
CKF Chehel Kaman Formation	KdF Khaseeb Formation	Plg Palang Formation
CKS Chechekhtian Suites	Khd Khadra Formation	POF Pindos-Olonos Flysch
CoS Coloured Melange	KuF Kalkaka Formation	PuF Pulawy Formation
CpP Cepacindere Formation	Kol Kolosh Formation	Put Putna Formation
DIF Dayfah Formation	KrC Kerman Conglomerate	QxC Quixia Conglomerate
DfF Duzdastlar Formation	KrF Khurmo Formation	Sob Sabli Formation
DaU Denizli Unit	Kw Khwari Formation	SoE Sochin Evaporites
EdF Ehdud Formation	Ksc Kiscular Formation	Sog Sagaleh Formation
Eha El Haria Formation	Ktv Kostrov Formation	Sot Satul Formation
Sbs Sebes Formation	Sgd Saragdinli Formation	Shn Shirink Series
Sia Sinan Formation	Smm Samma Formation	Srb Suweis Red Beds
Sym Sym Formation	SzF Szonok Flysch	Taq Taqye Formation
TaT Tetekos Series	TsS Tetsikar Series	TjT Tselja Formation
TsS Tetsikar Series	TsS Tetsikar Series	TsS Tetsikar Series
TsS Tetsikar Series	TsS Tetsikar Series	TsS Tetsikar Series

- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
- MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Fluvio-lacustrine, Alluvial plain
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 - TRANSITIONAL -**
 - Flooded lowland/marginal marine
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 - Evaporitic carbonate/clastic shelf
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radicalites - Siliceous sedimentary rocks
 - DEEP MARINE
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DOMAINS										
AAA Al Aynat Arch	AHJ Antalya High	CMM Central Mountain Massif	EBB Eastern Black-Sea Basin	HCB Holly Cross Mountain Belt	KKT Karakoram Terrane	LYB Lycian Basin	NBO Nain-Batt Ophiolitic Nappes	QTF Qiang Tang Plateau	SOB Somalia Coastal Basin	TnB Tanager Basin
ABA Achara-Tralet Back-Arc Basin	AyB Abyad Basin	CPM Central Mountain Platform	HNB Hadim Basin	HKB Hindu Kush Range	KKV Karakoram Volcanic Arc	MaD Maradah Graben	MaD Maradah Graben	RNO Remnant Neo-Tethys Ocean	SoT Sorokin Trough	TRR Troodos Ridge
ABM Alborz Margin	AzB Azraq Basin	CPT Central Pamir Terrane	EPB Eastern Fergana Basin	HKR Hindu Kush Range	KIR Kalamit Ridge	Mah Mardin High	NoB Nogal Basin	RSM Rhodopes-Strandia Massif	Sot South Pamir Terrane	TSa Tibesti Sirt Arch
ABV Artvin-Bolnisi Volcanic Arc	AzR Azov Ridge	CUM Central Uralian Massif	EMF Eastern Fergana Basin	HKB Hindu Kush Range	KIR Kalamit Ridge	MaH Malaya Massif	NOR North Somali Basin	SAM Seven-Akera Ophiolitic Massif	Srb Sirjan Block	TSM Tien Shan Massif
ABD Abu Darya Basin	BaB Bagana Basin	CYP Cyrenaica Plateau	EMF Eastern Fergana Basin	HKB Hindu Kush Range	KIR Kalamit Ridge	MaM Maglad Basin	NSO North Somali Basin	SAP Saharan Platform	Srb Sirjan Block	TuS Turgay Strait
AdM Andrin Massif	BAR Bahr el Arab Rift	CYP Cyrenaica Plateau	EPF Epirotides Platform	IIB Ili Basin	KoV Kohistan Volcanic Arc	MdM Mugodjar Massif	NSR North Sinai Ridges	SaP Sabal Platform	Srb Sirjan Block	UKS Ukrainian Shield
AGB Abu Ghuradig Basin	BOR Bey Daglan Basin	DIR Dnieper-Donets Basin	Eub Euphrates Basin	Ion Ionian Basin	Ksh Kasserine High	MeB Melut Basin	NUS Nubian Shield	SCB Satal Platform	Srb Sirjan Block	UsB Ustyurt Basin
AHt Alania High	BoR Bey Daglan Basin	DOB Dnieper-Donets Basin	FaB Fars Basin	Ion Ionian Basin	Ksh Kasserine High	Mgh Mangyalak High	ODS Odessa Shelf	SCB South Caspian Basin	Srb Sirjan Block	UsB Ustyurt Basin
AJT Ajdabiya Trough	BKR Baer Bassit - Kizilgadz Ridge	DOB Dnieper-Donets Basin	GaB Gabes Basin	IsB Istanbul Block	KzP Kazakh Plateau	MbB Mudugh Basin	OMM Oman Mountains	SoP Socotran Platform	Srb Sirjan Block	UsB Ustyurt Basin
ArB Araks Basin	BIM Balikhash Basin	DDB Dnieper-Donets Basin	GCB Greater Caucasus Basin	JH Jeffara High	Lah Lausitz High	MbB Mudugh Basin	OMM Oman Mountains	SaP Sabal Platform	Srb Sirjan Block	UsB Ustyurt Basin
ArB Araks Basin	BIM Balikhash Basin	DDB Dnieper-Donets Basin	GCB Greater Caucasus Basin	JH Jeffara High	Lah Lausitz High	MbB Mudugh Basin	OMM Oman Mountains	SaP Sabal Platform	Srb Sirjan Block	UsB Ustyurt Basin
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ArB Araks Basin	BIM Balikhash Basin	DDB Dnieper-Donets Basin	GCB Greater Caucasus Basin	JH Jeffara High	Lah Lausitz High	MbB Mudugh Basin	OMM Oman Mountains	SaP Sabal Platform	Srb Sirjan Block	UsB Ustyurt Basin
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ArB Araks Basin	BIM Balikhash Basin	DDB Dnieper-Donets								



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

YPRESIAN (56 - 47.8 Ma)

Map 14

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

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Equatorial scale: 1/15 000 000

Paleoreconstruction: 52 Ma, Eurasia fixed 0 km 500 km 1000 km Projection: Mercator, Ellipsoid: WGS84



- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
 - DEPOSITS
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Continental molasse - Intra-mountainous basin deposits
 - TRANSITIONAL -**
 - Slope/Basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Deltaic - Fan
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
 - MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Terrigenous platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN
 - Deep marine sediments
 - VOLCANISM -**
 - Undifferentiated volcanics
 - Volcaniclastics: Continental
 - Volcaniclastics: Shallow marine
 - Volcaniclastics: Deeper marine

- SYMBOL -

- TECTONIC ELEMENTS -

 - Accretionary complex
 - Tectonic melange
 - Active submarine ridge - Little or no deposition
 - OCEANIC DOMAIN -**
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (observed and inferred)
 - CONTINENTAL DOMAIN -**
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major anticlinal axis
 - Major synclinal axis
 - SUBSIDENCE -**
 - Active extensional tectonic subsidence
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
 - Flexural uplift: forebulge
 - PALEOSTRESS -**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
 - KINEMATICS -**
 - Africa/Eurasia relative motion in cm/year
 - India/Eurasia relative motion in cm/year
 - Arabia/Eurasia relative motion in cm/year
 - India/Africa relative motion in cm/year
 - PALEOGEOGRAPHY -**
 - Present-day coastlines
 - Present-day 5° grid
 - Paleoequator and Paleolatitudes (15° grid)
 - Paleoblock boundaries



FORMATIONS

AaF Aalji Formation	EGF El Garia Formation	Kos Kosmalyan Formation	Sar Sara'a Formation
AbA Achara-Trialet Back-Arc Basin	Egl Egmra Limestone	KuG Kumugeliyev Group	Sek Seske Formation
ABM Alborz Murgin	Fai Faid Formation	Kus Kusuri Formation	SFS Simferopolskaya Suite
ABV Arvin-Bafq Volcanic Arc	Fal Farofa Limestone	LIG Linzong Group	SJF Sinjar Formation
ADB Amu Darya Basin	FEG Fenghuoshan Group	Lki Laki Formation	SpF Sivkik Formation
AdM Andrim Massif	GAF Ghareh Aghash Formation	LoG Longmensha Group	Srb Suweis Red Beds
AGB Abu Ghadab Basin	Geb Gebesh Formation	Maj Majazi Formation	Srv Sarotav Formation
AH Alania High	Geh Gehroz Formation	MAs Marai Ascia Formation	Suz Suzaksky Formation
AJ Adabiyah Trough	GIr Gir Formation	MeF Medjiri Formation	ScC Sacczin Formation
AKA Akaka Basin	GIS Givar Series	MeG Melissou Group	SaF Sazimou Flysch
AIB Aitcaba Block	GSF Gercus Formation	MeL Mesdar Limestone	TaC Tarcau Formation
ANg Anza Graben	HdF Hadramout Formation	Min Minia Formation	ThF Thebes Formation
AnR Andrusov Ridge	HoE Hon Evaporites	MIS Mianasar Series	TIF Taleh Formation
ApP Apulian Platform	HoF Hoya Formation	MLF Middle Lefkara Formation	TSF Tociu Secu Flysch
ARS Araban Shield	IoL Ionian Limestone	Mnt Marita Formation	TSJ Tong Sarheh Unit
ATB Atiba-Tadjik Basin	JoF Joddola Formation	Nin Nindam Formation	TUF Tawi Uwuyyif Formation
ATH Antalya High	Jdr Jdeir Formation	NLF Neritic Limestone Formation	TZF Taleh Zang Formation
ATM Atbyn Tagh Mountains	JeF Jeza Formation	NIF Nayif Formation	UmF Umm Hijam Formation
ABR Abayad Basin	JhF Johrayn Formation	NMS Nummulitic Series	UMU Upper Maggar Unit
ABY Abayad Basin	JhF Johrayn Formation	NzF Nizanna Formation	UrA Umm er Rudhuma Formation
ATZ Azaqa Basin	JoF Jilolzi Formation	ObF Obbia Formation	UsF Usfan Formation
ABG Bagama Basin	JoF Jibou Formation	PaF Padbeh Formation	YoF Yoncali Formation
ABR Bahr el Arab Rift	Kah Khashan Formation	POF Pindos-Olonos Flysch	Zhe Zheye Formation
BDB Bey Daglan Basin	Kav Kavakly Formation	PIF Piatra Uscata Formation	ZIF Zibira Formation
CMC Central Mountain Platform	KbF Khaseeb Formation	QgF Qimugan Formation	ZnF Zimiquanzi Formation
CPT Central Pamir Terrane	KgF Khangiran Formation	RtF Ratgo Formation	Zon Zongpu Formation
CRP Crimean Platform	Kaz Kiriz Series	RUE Rus Evaporites	ZIF Ziarat Formation
Dor Dorog Formation	KgF Kiriz Series	RwF Runwaydaj Formation	SoE Sachun Evaporites
Duf Dzungul Formation	Kkp Kokturpak Formation	SoE Sachun Evaporites	
DzP Dzirula Platform			

DOMAINS

AAA Al Aawayn Arch	AnR Andrusov Ridge	BFB Balkan Fold-Thrust Belt	CUM Central Uralian Massif	EAP East Anatolian Platform	GdB Gardafu Basin	IBB Ily Basin	KIV Karakoram Volcanic Arc	LmE Lamu Embayment	ME Malta Escarpment	OmM Oman Mountains	SaP Saharan Platform	SoT Sorokin Trough	TbB Tabas Basin	WSB West Siberian Basin
ABA Achara-Trialet Back-Arc Basin	ApP Apulian Platform	BHM Bohemian Massif	CyP Cyrenaica Platform	EAB Eastern Black-Sea Basin	GdP Gedik Platform	INs Indian Shield	KIR Kalamir Ridge	LuB Lut Block	MP Malta Platform	PaB Palmyra Basin	SaP Saharan Platform	SPT South Pamir Terrane	TDB Tsa-Dacia Block	XzB Xigaze Forearc Basin
ABM Alborz Murgin	ARS Araban Shield	BKR Baer Basin - Kizilirmak Ridge	DEP Delagea Range	EFP East European Platform	GdH Gafsa Basin	IoB Ionian Basin	KIS Kuntun Shan	LyB Lycian Basin	MUT Mudharymah Trough	PCB Pre-Caspian Basin	SCB South Caspian Basin	SRR Sharub-Sheba Ridge	TLG Turkana Lokichar Graben	TaP Tazd Platform
ABV Arvin-Bafq Volcanic Arc	ATB Atiba-Tadjik Basin	BIB Balkhash Basin	DNF Dniepr-Donets Basin	EFB East Fergana Basin	GdH Godin High	IrB Irashan Basin	KgB Kuska Basin	MWM Muslim Bahg Waziristan Range	MRW Muslim Bahg Waziristan Range	PeB Pelagonian Basin	SeB Sefidabeh Basin	San Sanandaj-Sirjan Platform	TRR Trodos Ridge	ZaB Zayghan Basin
ADB Amu Darya Basin	ATH Antalya High	BIM Bitis Massif	Dor Dorog Formation	ERF Eratosthenes Platform	GTP Gavrovo-Tripolizza Platform	JFH Jeffara High	KSH Kassenne High	MBB Muglad Basin	NBB Niba Basin	Pal Pelagian Platform	SGT Songpan-Ganzi Terrane	SaP Satul Platform	TRR Trodos Ridge	ZaT Zallah Trough
AdM Andrim Massif	ATM Atbyn Tagh Mountains	CAC Central Anatolian Complex	DzP Dzirula Platform	EUP Euphrates Graben	GvA Gandese Volcanic Arc	JgB Junggar Basin	KWB Kataba Basin	MdM Mugodjar Massif	NOB Nogal Basin	PmB Pamir Basin	ShP Shatky Platform	SVB Sivas Basin	TSM Tien Shan Massif	ZaT Zallah Trough
AGB Abu Ghadab Basin	ABR Abayad Basin	CCP Central Mountain Platform	DzP Dzirula Platform	EGF El Garia Formation	GvA Gandese Volcanic Arc	KCB Karaborum Chios Basin	KZP Kazakh Plateau	NOR North Ophiolites Range	NPM North Pamir Massif	POB Pindos-Olonos Basin	ShP Sahneh-Harsin Range	SyB Syrtaryn Basin	UDV Orumieh-Dokhtar Volcanic Arc	
AH Alania High	ABY Abayad Basin	CMB Central Mountain Platform	DzP Dzirula Platform	EGF El Garia Formation	GvA Gandese Volcanic Arc	KCB Karaborum Chios Basin	KZP Kazakh Plateau	NPM North Pamir Massif	NOB Nogal Basin	POB Pindos-Olonos Basin	ShP Sahneh-Harsin Range	SyB Syrtaryn Basin	UDV Orumieh-Dokhtar Volcanic Arc	
AJ Adabiyah Trough	ABZ Azaqa Basin	CMB Central Mountain Platform	DzP Dzirula Platform	EGF El Garia Formation	GvA Gandese Volcanic Arc	KCB Karaborum Chios Basin	KZP Kazakh Plateau	NPM North Pamir Massif	NOB Nogal Basin	POB Pindos-Olonos Basin	ShP Sahneh-Harsin Range	SyB Syrtaryn Basin	UDV Orumieh-Dokhtar Volcanic Arc	
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AIB Aitcaba Block	BAR Bahr el Arab Rift	CPT Central Pamir Terrane	DzP Dzirula Platform	EGF El Garia Formation	GvA Gandese Volcanic Arc	KCB Karaborum Chios Basin	KZP Kazakh Plateau	NPM North Pamir Massif	NOB Nogal Basin	POB Pindos-Olonos Basin	ShP Sahneh-Harsin Range	SyB Syrtaryn Basin	UDV Orumieh-Dokhtar Volcanic Arc	
ANg Anza Graben	BDB Bey Daglan Basin	CRP Crimean Platform	DzP Dzirula Platform	EGF El Garia Formation	GvA Gandese Volcanic Arc	KCB Karaborum Chios Basin	KZP Kazakh Plateau	NPM North Pamir Massif	NOB Nogal Basin	POB Pindos-Olonos Basin	ShP Sahneh-Harsin Range	SyB Syrtaryn Basin	UDV Orumieh-Dokhtar Volcanic Arc	



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

PRIABONIAN

(37.8 - 33.9 Ma)

Map 16

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

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Equatorial scale: 1/15 000 000

Projection: Mercator, Ellipsoid: WGS84

0 km 500 km 1000 km

Paleoreconstruction: 36 Ma, Eurasia fixed



- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
 - DEPOSITS
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Continental molasse - Intra-mountainous basin deposits
- MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Terrigenous platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/Basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Deltaic - Fan
 - Radiolarians - Siliceous sedimentary rocks
 - DEEP MARINE
 - Deep marine sediments
- SYMBOL -**
 - Sediment influx
- TECTONIC ELEMENTS -**
 - Accretionary complex
 - Tectonic melange
 - Active submarine ridge - Little or no deposition
 - OCEANIC DOMAIN -**
 - Active extensional tectonic subsidence
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (observed and inferred)
 - CONTINENTAL DOMAIN -**
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major anticlinal axis
 - Major synclinal axis
 - PALEOSTRESS -**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
 - KINEMATICS -**
 - Africa/Eurasia relative motion in cm/year
 - India/Eurasia relative motion in cm/year
 - Arabia/Eurasia relative motion in cm/year
 - India/Africa relative motion in cm/year
 - PALEOGEOGRAPHY -**
 - Present-day coastlines
 - Present-day 5° grid
 - Paleoequator and Paleolatitudes (15° grid)
 - Paleoblock boundaries



FORMATIONS										
Aar Ador Formation	BGS Belaya Glna Suite	FgG Fenghuoshan Group	JhF Jahrum Formation	Kss Kassantau Formation	PfF Pirembel Formation	Smy Shumaysi Formation	Tsh Teshikdash Formation	Umu Upper Muggar Unit	Vof Volsdorf Formation	WfF Wild Flysch Facies
AdS Adeevkaya Suite	Blg Beloginskij Formation	GAB Gama Amaro Basalts	Kog Kogan Formation	Kus Kusur Formation	Qw Quiwa Formation	Sns Solonskaya Suite	TSU Tang Sarheh Unit	UMU Upper Muggar Unit	VVF Volsdorf Formation	WfF Wild Flysch Facies
Alh Alban Formation	Bor Borna Formation	Gaz Gaziantep Formation	Kah Kashkan Formation	KzG Kazilgaq Formation	QSF Qasar El Sagha Formation	Sou Souar Formation	TSU Tang Sarheh Unit	UMU Upper Muggar Unit	VVF Volsdorf Formation	WfF Wild Flysch Facies
AIS Aliminskaya Suite	Bsb Bashbulake Formation	GHI Ghali Formation	KDF Khaseeb Formation	LCL Lower Coralline Limestone	Roa Roshda Formation	SRB Suweis Red Beds	VVF Volsdorf Formation	WfF Wild Flysch Facies	WfF Wadi Thamot Formation	Zof Zovshen Formation
AjJ Ajghal Formation	BuM Buda Maris	GIM Globigenina Marl	LRF Lower Red Formation	LRF Lower Red Formation	Riz Rioman Formation	Szy Suweyi Formation	WfF Volsdorf Formation	WfF Wadi Thamot Formation	Zof Zovshen Formation	Zof Zovshen Formation
Ans Agnyaiskaya Suite	Cho Chokki Formation	GRF Goveh-Rud Flysch	KRG Kirgiz Formation	MoG Moadi Group	RuU Ruk-Um	Szf Szolnok Flysch	WfF Volsdorf Formation	WfF Wadi Thamot Formation	Zof Zovshen Formation	Zof Zovshen Formation
ApF Apollonia Formation	CoG Cona Group	GTF Gavrovo-Tripolitza Flysch	KzG Kirgiz Series	Mat Matiyah Formation	Sag Salm Aghaji Formation	Tah Talikhan Formation	WfF Volsdorf Formation	WfF Wadi Thamot Formation	Zof Zovshen Formation	Zof Zovshen Formation
Arn Arnaulter Formation	CrF Cheralil Formation	Khb Khababa Formation	Mda Marda Formation	MLF Middle Lefkara Formation	Sdn Shindand Series	Sch Schöndewalde Formation	Yof Yavuz Formation	Zof Zovshen Formation	Zof Zovshen Formation	Zof Zovshen Formation
Aras Arasan Formation	CTF Cemalettin Formation	Hem Hemis Formation	Khv Kharkov Formation	MLF Middle Lefkara Formation	Sdn Shindand Series	Sch Schöndewalde Formation	Yof Yavuz Formation	Zof Zovshen Formation	Zof Zovshen Formation	Zof Zovshen Formation
Avo Avahon Formation	DOF Dobaa Formation	HMF Holk El Menzel Formation	Kkr Karakur Formation	Mrr Murree Formation	Sel Selimiye Formation	Tcf Tarcau Formation	Tcf Tarcau Formation	Tcf Tarcau Formation	Tcf Tarcau Formation	Tcf Tarcau Formation
AvM Avran Marls	DCF Dolan Chlick Formation	HoF Hoyu Formation	Knt Kintar Suite	Nag Nagardun Group	Sen Senaya Formation	Tdf Tendf Formation	Tdf Tendf Formation	Tdf Tendf Formation	Tdf Tendf Formation	Tdf Tendf Formation
AwJ Awjilah Formation	Dgs Dagshai Formation	HvF Havillat Formation	Kod Kond Formation	NRU Nimu Redbed Unit	Shb Shahbazan Formation	Tgy Tangay Series	Tgy Tangay Series	Tgy Tangay Series	Tgy Tangay Series	Tgy Tangay Series
Ayd Aydim Formation	DmF Damman Formation	ICF Inçik Formation	Kou Kouon Formation	OBF Obbia Formation	Shm Shama Formation	Tif Taleh Formation	Tif Taleh Formation	Tif Taleh Formation	Tif Taleh Formation	Tif Taleh Formation
BeS Beloginskaya Suite	DnF Darnah Formation	IoL Ionian Limestone	Kra Krania Formation	OJF Ojaghshlagh Formation	Sie Siemiën Formation	TRB Turkestan Formation	TRB Turkestan Formation	TRB Turkestan Formation	TRB Turkestan Formation	TRB Turkestan Formation
Bey Beylerbeyi Formation	Drm Dorende Formation	JoL Jaddala Formation	Krh Kirithar Formation	PoF Pabdeh Formation	Sks Soksal Formation	Trk Turkestan Formation	Trk Turkestan Formation	Trk Turkestan Formation	Trk Turkestan Formation	Trk Turkestan Formation
BGF Bet Guvrin Formation	EKF Eskipolati Formation	Jeb Jebes Formation	Ksn Kesan Formation	PoF Pomorze Formation	Smd Samdun Formation	TSF Tocila Secu Flysch	TSF Tocila Secu Flysch	TSF Tocila Secu Flysch	TSF Tocila Secu Flysch	TSF Tocila Secu Flysch

DOMAINS										
AAA Al Aawaynat Arch	ApP Apulian Platform	BKR Baer Bassit - Kiziladag Ridge	CRK Crimean Range	EAP East Anatolian Platform	GID Gift Delta	ICB Iranian Central Basin	KKT Karakoram Terrane	LyN Lycian Nappes	MIP Malta Platform	POR Pindos-Dionos Range
ADB Ami Darya Basin	ArS Arabian Shield	BBB Balkhash Basin	CUM Central Uralian Massif	EBB Eastern Black-Sea Basin	GodH Godin High	IGR Ispendere-Guleman Ridge	KqB Kuqa Basin	MuT Muthayminah Trough	PWR Parjween-Walash Range	SIT Sirt Trough
AFB Alborz Foredeep Basin	ATB Afghan-Tadjik Basin	BnR Binalud Range	CyH Cyprenica High	EBD El Bahr Delta	GTG Gavrovo-Tripolitza Flysch Basin	IIB Ili Basin	KQF Kunlun-Qiman Tagh Foreland Basin	NIB Niba Basin	QTT Qiang Tang Terrane	Sob Somalia Coastal Basin
AGB Abu Gharadig Basin	ATM Antalya High	BPM Bitlis-Puturge Massif	CyP Cyprenica Platform	EEP East European Platform	GUP Gavrovo-Tripolitza Platform	INS Indian Shield	KQT Kunlun-Qiman Tagh Thrust Belt	Nob Nogal Basin	RSM Rhodes-Strandja Massif	SPT South Pamir Terrane
AH Alania High	ATY Atayn Tagh Mountains	BrB Bourgas Basin	DM Dobrogea Massif	EPB East Fergana Basin	GUP Gurum Platform	IOB Ionian Basin	KSH Kasserine High	NOR Neyrz Ophiolites Range	SAP Saharan Platform	SSP Sanandaj-Sirjan Platform
AJ Atjabaya Trough	CAC Central Anatolian Complex	DBB Dniepr-Donets Basin	DBB Dniepr-Donets Basin	EPK Eastern Pontides Range	GUR Gurbun Ridge	IOB Ionian Basin	Kuf Kura Foreland Basin	NSO North Somali Basin	SAP Saharan Platform	SPP Sabal Platform
AKB Araks Basin	ZaB Azraq Basin	CFB Carpathian Flysch Basin	DD Darfur Dome	EUP Euraethes Platform	HAD Hadim Nappes	JGB Junggar Basin	LKR Lesser Caucasus Range	NUS Nubian Shield	SCB South Caspian Basin	SvB Syvas Basin
AIB Alcapa Block	BAR Bahri el Arab Rift	CHB Chu Sarysu Basin	DHP Dhorfar Platform	EUG Euphrates Graben	HAR Haierchi Ridge	KaR Kattaniya Ridge	LeB Levant Basin	OMM Oman Mountains	SCS Scythian Shelf	SvB Syvas Basin
AR Alborz Range	BAR Bahri el Arab Rift	CIP Central Iranian Platform	DBB Dniepr-Donets Basin	EPB East Fergana Basin	HFB Himalayan Foreland Basin	KaR Kattaniya Ridge	LeB Levant Basin	PAB Palmyra Basin	SCS Scythian Shelf	SvB Syvas Basin
AMB Alpine Molasse Basin	BIM Bohemian Massif	CMP Central Mountain Platform	DBB Dniepr-Donets Basin	EPB East Fergana Basin	HFB Himalayan Foreland Basin	KaR Kattaniya Ridge	LeB Levant Basin	PAB Palmyra Basin	SCS Scythian Shelf	SvB Syvas Basin
AnB Anza Basin	BIM Bohemian Massif	CMP Central Mountain Platform	DBB Dniepr-Donets Basin	EPB East Fergana Basin	HFB Himalayan Foreland Basin	KaR Kattaniya Ridge	LeB Levant Basin	PAB Palmyra Basin	SCS Scythian Shelf	SvB Syvas Basin
AnR Andrusov Ridge	BIM Bohemian Massif	CMP Central Mountain Platform	DBB Dniepr-Donets Basin	EPB East Fergana Basin	HFB Himalayan Foreland Basin	KaR Kattaniya Ridge	LeB Levant Basin	PAB Palmyra Basin	SCS Scythian Shelf	SvB Syvas Basin

FAULTS	
CBR Carlsberg Ridge	CHF Chamam Fault
IYZ Indus-Yarlung Suture Zone	MBT Main Boundary Thrust
MHL Mid-Hungarian Line	OWT Owen Transform
Tf Timok Fault	



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

BURDIGALIAN

(20.4 - 16.0 Ma)

Map 18

Authors: **BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.**

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Equatorial scale: 1/15 000 000

Projection: Mercator, Ellipsoid: WGS84



- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
 - DEPOSITS
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Continental molasse
 - Intracontinental basin deposits
- MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Reef platform - Carbonate build-up
 - Carbonate platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radiolites - Siliceous sedimentary rocks
 - DEEP MARINE
 - Deep marine sediments
- TRANSITIONAL -**
 - Flooded lowland/Marginal marine
 - Coastal plain/Shallow mixed shelf
 - Deltaic - Fan
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
- SYMBOL -**
 - Sediment influx
- TECTONIC ELEMENTS -**
 - Accretionary complex
 - Tectonic melange
 - Active submarine ridge - Little or no deposition
 - Active extensional tectonic subsidence
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (observed and inferred)
- OCEANIC DOMAIN -**
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (observed and inferred)
- SUBSIDENCE -**
 - Active subduction zone
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
 - Flexural uplift: forebulge
- CONTINENTAL DOMAIN -**
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major anticlinal axis
 - Major synclinal axis
- PALEOSTRESS -**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
- KINEMATICS -**
 - Nubia/Eurasia relative motion in cm/year
 - Arabia/Eurasia relative motion in cm/year
 - India/Eurasia relative motion in cm/year
 - India/Nubia relative motion in cm/year
- PALEO GEOGRAPHY -**
 - Present-day coastlines
 - Paleoequator and Paleolatitudes (15° grid)
 - Present-day 5° grid
 - Paleoblock boundaries



FORMATIONS											
AcF	Alibonca Formation	Che	Chehel Evaporites	GeB	Getra Basalt	Haf	Hazevo Formation	Lfa	Lower Fars Formation	Pkf	Pokhna Formation
Adb	Amu Darya Basin	Chn	Chunaboti Formation	GeB	Getra Basalt	Hof	Hofuf Formation	LoS	Lokhona Shale	Qf	Qirra Formation
Aip	Adolei Basalts	CfB	Ches-Chatou Formation	Ggu	Ghesa-Ghaud Unit	Hil	Holl Formation	LoF	Lisuq Formation	Qof	Qom Limestones
Adk	Adok Formation	CsF	Chechic Formation	Gha	Ghara Formation	Jbf	Jeribe Formation	Lts	Lataband Series	RoB	Rohat Basalts
Adw	Adawnib Formation	Cuc	Cunguis Complex	Ghr	Ghar Formation	Jig	Jizan Group	Mgs	Massaget Series	Rag	Ragusa Formation
Aff	Al Faidyah Formation	Dal	Damole Ignimbrites	Ggj	Gaj Formation	Jkf	Jidike Formation	Mcf	Monti Climiti Formation	Raw	Rawicz Formation
Agt	Agltin Formation	Dam	Dam Formation	Gkb	Getra Kele Basalts	Jmf	Jimidi Formation	Mcf	Merca Formation	Ran	Ranga Formation
Ahs	Ahwaz Sandstone	Dcf	Deringay Formation	Gka	Gökay Formation	Kal	Kalhar Evaporites	Mks	Mokoyev Series	Ris	Ritsa Suite
Alt	Altaitas Formation	Deu	Dehridan Unit	Gkr	Gebel Khazhab Red Beds	Kao	Karacoran Formation	Mmf	Mamrua Formation	Rjf	Ras Abd Jallil Formation
Asm	Asmari Formation	Dif	Dhiban Formation	Kar	Kareem Formation	Rsf	Rasul Formation	MoF	Moghra Formation	Rud	Rudeis Formation
Bas	Bathysiphonayava Suite	Dir	Diral Formation	Gly	Gölyoğu Formation	Ket	Ketana Formation	MoM	Möllin Member	RwG	Rawalpindi Group
Bas	Bastau Formation	Dns	Danisman Formation	Gor	Gorazda Formation	Kez	Kezilagiy Formation	Mrd	Maradah Formation	RzF	Razak Formation
Bgf	Bet Guvin Formation	Dub	Dubar Formation	Gov	Govanola Formation	Kgl	Kargil Formation	Mrr	Murrees Formation	Sbz	Subz Unit
Bld	Baldshuan Formation	Euf	Euphrates Formation	Gsf	Guta Soimulaji Formation	Kgz	Kirgiz Series	Mss	Messibouta Formation	Sdz	Sarazda Formation
Bis	Bekkhlian Series	Fir	Firat Formation	Gur	Gur Formation	Ksl	Kasauli Formation	Nmf	Nayrn Formation	Shg	Shihir Group
BoS	Borsa Sandstone	Fnf	Frangya Formation	Gvc	Galatian Volcanic Complex	Kte	Kurtekin Suites	Nru	Nima Redbed Unit	Shg	Shihir Group
Bof	Buraqan Formation	Fof	Fortuna Formation	Hob	Habab Formation	Hod	Hadrakh Formation	Hod	Hadrakh Formation	Shg	Shihir Group
BuS	Burji Soyoma Formation	Goc	Gongrinboche Conglomerate	Hai	Hami Formation	KyF	Kapikoya Formation	Oif	Oliguinskaya Formation	Sks	Sakaraoukskaya Suite
CBB	Chew Bahir Basalt	Goc	Gochsaran Formation	Hai	Hami Formation	KyF	Kapikoya Formation	Oif	Oliguinskaya Formation	Sks	Sakaraoukskaya Suite

DOMAINS															
AAA	Alwaynat Arch	ATR	Acharya-Trialet Range	BPR	Bitlis-Puturge Range	DAT	Dor el Abid Trough	EMB	East Mediterranean Basin	HFB	Himalayan Foreland Basin	KDF	Kopet Dagh Fold-Thrust Belt		
AJA	Amu Darya Basin	AIR	Altai Range	BRB	Bourgas Basin	DDB	Dniestr-Domets Basin	EPR	Eastern Pontides Range	HIB	Hestia Basin	HSB	Hindru Kush Foreland	KFB	Karati Foreland Basin
AJT	Ajdabya Trough	AWD	Awaz Delta	CAC	Central Anatolian Complex	DID	Dinarid Dome	ERH	Eratothes High	HKP	Hindru Kush Foreland	IRB	Iranian Central Basin	KKT	Karakoram Terrane
AIB	Aicapa Graben	ABZ	Azraq Basin	CBG	Cher Bahar Graben	DHP	Dhofar Platform	ESB	East Slovakian Basin	HMB	Haymana Basin	ICB	Iranian Central Basin	KMB	Kamchik Basin
AIP	Aicapa Plateau	BAB	Bagara Basin	CFB	Carpathian Flysch Basin	DNE	Dnests High	ESE	Eastern Sirt Embayment	ICB	Iranian Central Basin	KCF	Karakoram Fold-Thrust Belt	KNF	Karakoram Fold-Thrust Belt
AIR	Airuz Range	BAG	Bahal Graben	CFB	Carpathian Flysch Basin	DOP	Dobrova Platform	EUP	Ethiopian Plateau	ICB	Iranian Central Basin	KAB	Kura Basin	KLP	Kura Foreland Basin
AMB	Alpine Molasse Basin	BAR	Bahr el Arab Rift	CkB	Cankiri Basin	DOR	Dor Graben	EUB	Euphrates Basin	IBL	Ili Basin	KQF	Kunlun-Qiman Tagh Foreland Basin	KQK	Kunlun-Qiman Tagh Thrust Belt
AnB	Anza Basin	BOP	Bey Daglan Platform	CMP	Central Mountain Platform	DZE	Desful Embayment	FEB	Fergana Basin	IND	Indian Delta	KQT	Kunlun-Qiman Tagh Thrust Belt	KAL	Kassene High
Anr	Andrusov Ridge	CPT	Central Pamir Terrane	CFT	Central Pamir Terrane	DZH	Dzula High	FKB	Fore Kopet Dagh Basin	IND	Indian Shield	KAP	Karakoram Accretionary Prism	KTH	Karakoram-Turkryk High
ApP	Arabian Platform	BEF	Bengal Fan	CIR	Crinmean Range	EAD	El Arish Delta	GGB	Great Gulf Graben	IOB	Ionian Basin	KAT	Karakoram-Turkryk High	KUR	Kura Foreland Basin
Ars	Arabian Shield	BEF	Berbera Graben	CIR	Crinmean Range	EAP	East Anatolian Platform	GGB	Great Gulf Graben	IOB	Ionian Basin	KAT	Karakoram-Turkryk High	KUR	Kura Foreland Basin
AsC	Ashtar Graben	BHM	Bohemian Massif	CUB	Cunguis Basin	EBB	Eastern Black-Sea Basin	GGB	Great Gulf Graben	IOB	Ionian Basin	KAT	Karakoram-Turkryk High	KUR	Kura Foreland Basin
ATB	Alghan-Tadjik Basin	BIM	Balkhash Massif	CLM	Central Uralian Massif	EBD	El Bahr Delta	GGB	Great Gulf Graben	IOB	Ionian Basin	KAT	Karakoram-Turkryk High	KUR	Kura Foreland Basin
AH	Antalya High	BIB	Balkhash Basin	CYP	Cyrenaica Platform	EEP	East European Platform	GUP	Gurum Platform	JZB	Jaizan Basin	KJB	Kuban Basin	KLB	Kura Foreland Basin
ATM	Atlyn Tagh Mountains	BNR	Binalud Range	DaB	Danube Basin	EgG	Eger Graben	Ham	Hadi Massif	JZB	Jaizan Basin	KJB	Kuban Basin	KLB	Kura Foreland Basin



PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

TORTONIAN

(11.6 - 7.2 Ma)

Map 19

Authors: BARRIER E., VRIELYNCK B., BROUILLET J.-F., BRUNET M.-F.

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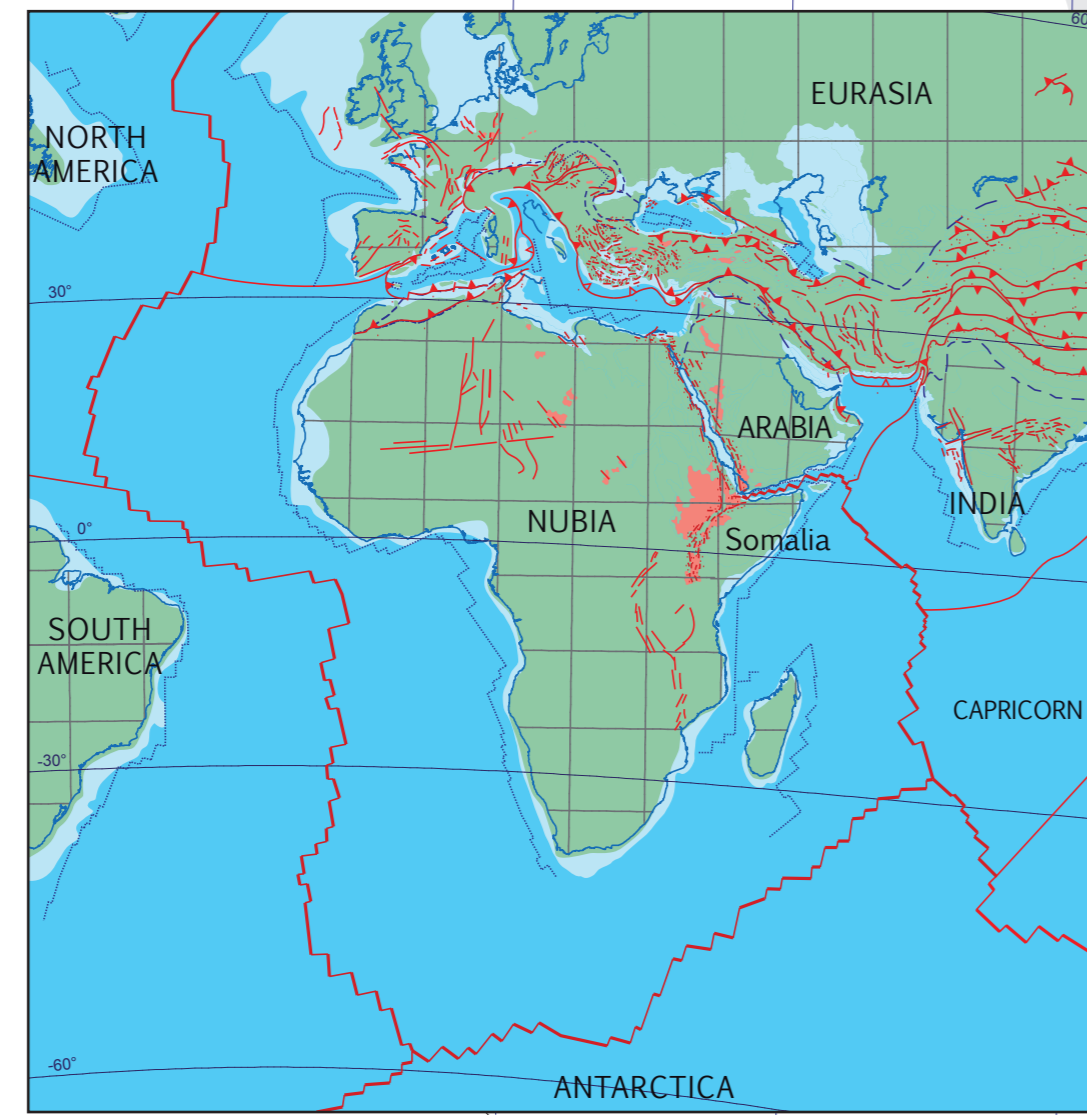
Equatorial scale: 1/15 000 000

Projection: Mercator, Ellipsoid: WGS84



- LITHOLOGY -

- Not interpreted
- CONTINENTAL -**
 - EXPOSED LAND - NO DEPOSITION
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
- MARINE -**
 - PLATFORM - SHALLOW SHELF
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Terrigenous platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN
 - Slope/Basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radiolarites - Siliceous sedimentary rocks
 - DEEP MARINE
 - Flooded lowland/marginal marine
 - Coastal plain/shallow mixed shelf
 - Deltaic - Fan
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
- VOLCANISM -**
 - Undifferentiated volcanics
 - Volcaniclastics: Continental
 - Volcaniclastics: Shallow marine
 - Volcaniclastics: Deeper marine
- TECTONIC ELEMENTS -**
 - Active subduction zone
 - Inferred active subduction zone
 - Active oceanic spreading center and transform
 - Inferred active oceanic spreading center and transform
 - Oceanic/continental crust boundary (observed and inferred)
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major anticlinal axis
 - Major synclinal axis
 - Active extensional tectonic subsidence
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin (post-rift)
 - Flexural uplift: forebulge
- CONTINENTAL DOMAIN -**
 - Major thrust fault
 - Major strike-slip/wrench fault
 - Major normal fault
 - Detachment, low angle normal fault
 - Major anticlinal axis
 - Major synclinal axis
- PALEOSTRESS -**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
- KINEMATICS -**
 - Nubia/Eurasia relative motion in cm/year
 - India/Eurasia relative motion in cm/year
 - Arabia/Eurasia relative motion in cm/year
 - India/Nubia relative motion in cm/year
- PALEO GEOGRAPHY -**
 - Present-day coastlines
 - Paleo-equator and Paleolatitudes (15° grid)
 - Present-day 5° grid
 - Paleoblock boundaries



FORMATIONS

Abd Al Bad Formation	Bkr Bakry Formation	Dey Deyim Formation	God Goderzi Formation	KKM Kasim Molasse	Mf Merca Formation	Sba Sidi Bannoun Formation	Tvf Tavildara Formation
ADF Abu Dabbab Formation	BIS Bekkhalin Series	DIS Deyim Suite	GRS Gray Series	Kik Kalkmaktay Formation	Mis Mishan Formation	SIG Siwaliks Group	Ufa Upper Red Formation
AIF Anafarta Formation	Bit Balta Formation	DNV Djabel Nuqal Volcanics	GVC Galation Volcanic Complex	Kot Korkerek Formation	Mur Mursi Formation	Smo Semo Formation	URF Upper Red Formation
AJF Ajgha Jari Formation	BuS Buji Sayoma Formation	DPH Dar Pahn Unit	GWC Gwalan Volcanic Complex	Kri Kirivodi Formation	Mur Mursi Formation	Snt Santosh Formation	Vof Volpovo Formation
AKC Akso Conglomerate	Com Cameli Formation	Dsh Dushanbe Formation	Hoz Hozeh Formation	Krp Korjazy Formation	Nimf Nimf Formation	WQF Wadi Al Qattarah Formation	WQF Wadi Al Qattarah Formation
AKh Al Khums Formation	CBF Chibabeyli Formation	Dun Dunganab Formation	HIF Hifa Formation	Kiv Korvuna Formation	Nmf Naryn Formation	Srb Sarbant Formation	WUG Wuchuo Formation
Alz Alazani Formation	CHG Chu Group	Duz Duzhantzi Formation	Hid Hida Formation	Kz Kazali Formation	Pbf Pakabulak Formation	Srr Sarar Formation	Yif Yilmazkoy Formation
Amb Amber Formation	CHS Chuy Series	Eld Eldari Formation	HRB Harat Khaybar Basalts	Kuz Kuzgun Formation	PKf Pakhna Formation	Swd Sawadi Formation	Yyk Yaykil Formation
Anb Anchar Basalt	CJF Chinyi Formation	Gcf Gelinkin Formation	HKB Harat Rahat Basalts	KGZ Kizilgag Group	PFf Paznan Formation	Szi Szolnok Formation	Zei Zelt Formation
ARf Al Rajmah Formation	CS Chikra Series	GCU Gray Conglomerate Unit	IJF Injana Formation	LGM Loupin Member	QWf Qawassim Formation	TEL Teliqna Formation	Zer Zerf Formation
ASB Ash Shamah Basalts	CyC Caykurt Formation	Ghw Ghawwas Formation	INC Incesa Formation	LUS Lutaband Series	ReB Revo Basalt	TIV Tibesti Volcanics	Zqf Ziqim Formation
BoH Bandar Harshau Formation	DoC Dana Conglomerate	Gjf Gaj Formation	IVf Ivanka Formation	Lut Lut Formation	Rnf Rauno Formation	TIF Taleh Formation	
Bat Bathon Formation	Dag Daga Formation	Gkk Gokkyk Formation	Kal Kalanishyu Formation	Mag Massaget Series	Rst Rustak Formation	Tqf Taqa Formation	
BCF Blue Clay Formation	Das Dashava Formation	Gks Goksguit Formation	KeB Kele Basalt	Mar Mabra Rhyolites	Saf Salkoun Formation	Ttg Tetang Formation	
BeG Beglia Formation	Ddf Dibdilba Formation	Gly Golyka Formation	Kgc Kangcun Formation	MCF Monti Climiti Formation	Sao Saouaf Formation	Tub Tubat Formation	

DOMAINS

AAA Al Aynat Arch	ATB Afghan-Tadjik Basin	CBK Cankiri Basin	DLB Dasht-e-Lut Basin	ETP Ethiopian Plateau	HB Herodotus Basin	KQF Kunlun-Qiman Tagh Foreland Basin	MCB Middle Caspian Basin	NaB Naryn Basin	PpD Pripyat Depression	Sma South Mangshak Basin	TAF Tunisian Atlas Foredeep Basin	TuH Tuarkyr High	KYT Kashgar-Yecheng Thrust
AaB Alai Basin	ATJ Atar Triple Junction	CIB Cilicia Basin	DIR Dalabute Range	EUB Euphrates Basin	HZR High Zagros Range	KQT Kunlun-Qiman Tagh Thrust Belt	MGB Muglad Basin	NAT North Aegean Trough	PTT Poral Trough	SoB Somalia Coastal Basin	TAR Tunisian Atlas Range	TuL Turgay Lowland	KZF Kazerum Fault
ACM Afghan Central Mountains	ATM Atay Tagh Mountains	CMC Cameli Basin	DNB Danakil Block	FEB Fergana Basin	KB Issyk-Kul Basin	KF Kirhar Fold Belt	MGG Mendere Grabens	ND Nile Delta	QDR Qara Dagh Range	SoP Somalia Plateau	TmM Tabas Massif	UKH Ukrainian High	MBT Main Boundary Thrust
ADB Amu Darya Basin	ATN Atay Tagh Mountains	CHR Corinth Rift	DNH Donets High	FKB Fere Kopt Dagh Basin	IB Ili Basin	KuF Kura Foreland Massif	MGM Mugodjar Massif	NOB North Basin	QTA Qiang Tang Anticlinorium	SoT Sorokin Trough	TDB Tisza-Dacia Block	UstB Ustyurt Basin	MCT Main Central Thrust
AdB Adana Basin	ATR Achara-Trialeti Range	CoR Cott Range	DoP Dobrogea Platform	FaF Fars Fold-Thrust Belt	IND Indus Delta	KwR Katakawz Range	MeB Melit Massif	NPR North Pamir Range	RhM Rhodopes Massif	SuB Skopje Basin	TeB Terek Basin	VaB Vardar Basin	MHL Mid-Hungarian Line
AIB Atrak Intramontane Basin	AR Atay Range	CoR Central Pamir Range	DZE Dzeftla Embayment	GCR Greater Caucasus Range	JAH Jaisalmer High	KYH Kyzylkum High	MeM Mendere Basin	NSO North Somali Basin	RiB Rioni Basin	SPT South Pamir Terrane	TeR Terskyk Thrust	VB Venna Basin	MKS Miks Kyrenia Fault
AIR Alai Range	BAH Bah el Arab Rift	CRB Cretan Sea Basin	DH High Dzhirgatala	JMB Jebel al Drouz Mountain	IND Indus Delta	KP Kazakh Plateau	MeM Mendere Basin	ONS Ono Basin	RSR Red Sea Rift	SST Sistan Fold-Thrust Belt	TFB Tadjik Fold-Thrust Belt	WIM Volhynian Massif	MKT Main Karakoram Thrust
AJT Ajdabiya Trough	BEF Bengali Fan	CR Crimean Range	EAD El Arish Delta	JH Jeffara High	JH Jaisalmer High	LAD Ladakh Arc Terrane	MFT Makran Flysch Trough	OMM Oman Mountains	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	MPT Main Pamir Thrust
AIC Aicapa Block	BHM Bohemian Massif	CR Chalkal Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	MZT Main Zagros Thrust
AIP Aicapa Plateau	BM Balkan Massif	CR Chalkal Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	NBF Nayband Fault
AIR Alborz Range	BM Balkan Massif	CR Chalkal Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	NSF Neh Fault System
AMB Alpine Molasse Basin	BR Binalud Range	CR Crimean Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	OWT Owen Transform
AMB Armenian Basin	BR Binalud Range	CR Crimean Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	RPT Roshan-Pshart Thrust
ANB Anza Basin	BR Binalud Range	CR Crimean Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	SCR Sheba Oceanic Ridge
ANB Anza Basin	BR Binalud Range	CR Crimean Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	STD South Tibetan Detachment
APh Apuseni High	BYB Bayanbulak Basin	CR Crimean Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	TF Terek Fault
APu Apulian Platform	CAAC Central Anatolian Complex	CR Crimean Range	EAL Eastern Alps	JG Jabal Ghar	JH Jaisalmer High	LAD Ladakh Arc Terrane	MeM Mesosaria Basin	OWB Owen Basin	RuP Russian Platform	SST Sistan Fold-Thrust Belt	TuB Turfan Basin	WBB Western Black-Sea Basin	TF Terek Fault
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PALEOTECTONIC RECONSTRUCTION OF THE CENTRAL TETHYAN REALM

PIACENZIAN

(3.6 - 2.6 Ma)

Map 20

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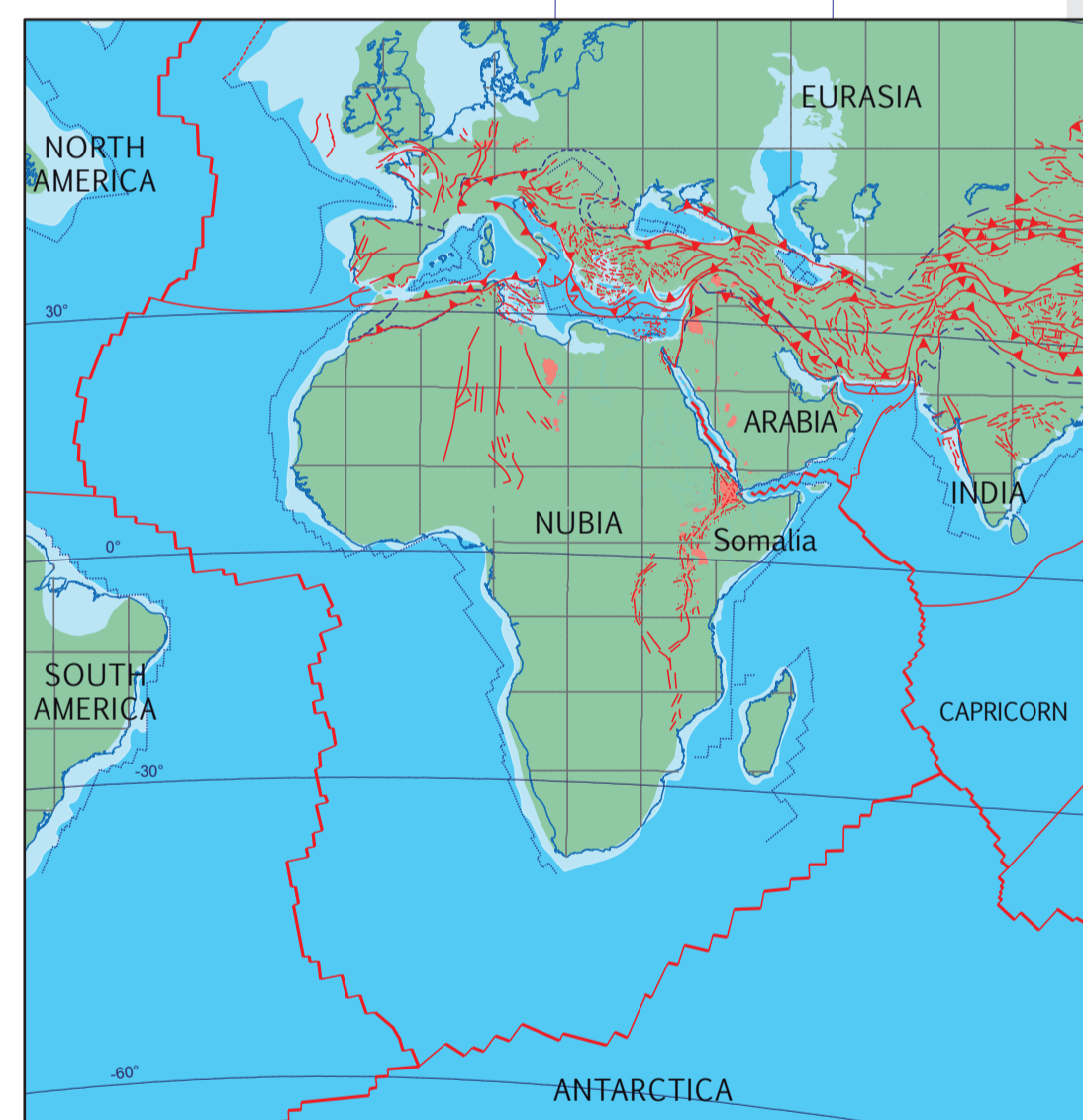


Equatorial scale: 1/15 000 000

0 km 500 km 1000 km Projection: Mercator, Ellipsoid: WGS84



- LITHOLOGY**
 - Not interpreted
 - CONTINENTAL**
 - Exposed land - no deposition
 - High-moderate mountains
 - Active mountain range
 - Low mountain and plateau
 - Lowland erosional plain
 - DEPOSITS**
 - Fluvio-lacustrine, Alluvial plain
 - Large scale lacustrine deposits
 - Continental molasse - Intra-mountainous basin deposits
 - TRANSITIONAL**
 - Flooded lowland/marginal marine
 - Coastal plain/shallow mixed shelf
 - Deltaic - Fan
 - Hypersaline - Evaporites
 - Evaporitic carbonate/clastic shelf
 - MARINE**
 - Platform - shallow shelf
 - Reef platform - carbonate build-up
 - Carbonate platform
 - Terrigenous platform
 - Coarse & fine clastics
 - DEEPER SHELF - SLOPE - BASIN**
 - Slope/basinal deeper marine carbonates
 - Slope/basinal deeper marine clastics
 - Radiolarite - Siliceous sedimentary rocks
 - DEEP MARINE**
 - Deep marine sediments
 - Sediment influx
 - VOLCANISM**
 - Undifferentiated volcanics
 - Volcaniclastics: Continental
 - Volcaniclastics: Shallow marine
 - Volcaniclastics: Deeper marine
 - TECTONIC ELEMENTS**
 - Active submarine ridge - Little or no deposition
 - Active extensional tectonic subsidence
 - Passive thermal subsidence (post-rift)
 - Flexural subsidence: flexural basin
 - Flexural subsidence: foredeep
 - Flexural uplift: forebulge
 - PALEOSTRESS**
 - Extensional regime
 - Strike-slip regime
 - Compressional regime
 - KINEMATICS**
 - Nubia/Eurasia relative motion in cm/year
 - India/Eurasia relative motion in cm/year
 - Arabia/Eurasia relative motion in cm/year
 - India/Nubia relative motion in cm/year
 - PALEOGEOGRAPHY**
 - Present-day coastlines
 - Paleoequator and Paleolatitudes (15° grid)
 - Present-day 5° grid
 - Paleoblock boundaries



FORMATIONS

As	Al Assah Formation	Bat	Bathon Formation	Dog	Daga Formation	IF	Ital Formation	LsF	Lisan Formation	NvS	Navchochay Suite	Tkk	Thakkhola Formation
Abb	Abbas Formation	Bcs	Bactrian Series	DDB	Djebel Druze Basalts	ILF	Ili Formation	Luf	Lahti Formation	PFF	Porto Farina Formation	Tij	Trojako Formation
Adr	Adra Formation	BHF	Bal Hassan Formation	DdF	Diddibba Formation	ILF	Ileret Formation	Lut	Lut Formation	PNC	Palani-Nahang Conglomerate	UoF	Usno Formation
AJF	Agha Jari Formation	Bkr	Baktry Formation	Dey	Dayim Formation	IRF	Iraqah Formation	MAF	Marsa Alam Formation	QWF	Qarat Weddah Formation	URF	Upper Red Formation
AKI	Akhalikolaki Formation	Bkr	Bakhtyari Formation	Dgc	Dogonick Formation	IZF	Izvoorele Formation	McF	Merca Formation	VuF	Vuka Formation	VuF	Vuka Formation
AKI	Akhalikolaki Formation	Bkr	Bakhtyari Formation	Dgc	Dogonick Formation	IZF	Izvoorele Formation	McF	Merca Formation	VuF	Vuka Formation	VuF	Vuka Formation
AM	Amora Formation	Bul	Bulal Basalt	Dsf	Desset Formation	JMF	Jiu Motru Formation	MIB	Mikhtaram Beds	SbB	Sbabli Formation	YF	Yalo Formation
Asb	Assabira Formation	Cam	Cameli Formation	Dsh	Dushanbe Formation	KaB	Karagadag Basalts	Mis	Mishan Formation	Seg	Segui Formation	Yer	Yerer Tullu Wellet Volcanics
ASG	Abu Shagara Group	CbF	Cihanbaji Formation	Dus	Dusheti Formation	Kir	Kolarovo Formation	Mrg	Merga Red Beds	Sey	Seyston Formation	Zha	Zhadano Formation
ASS	Alur Straitoid Series	CBT	Chilola Badda Trochytes	Esk	Esikly Formation	Krb	Kirkbog Formation	Mrm	Makran Molasse	Shg	Shungura Formation	Zha	Zhadano Formation
AYF	Alchayyl Formation	CHG	Chu Group	EWF	El Westoni Formation	Kic	Kircsallit Formation	Nob	Novasi Basalts	SIG	Sivolis Group	Zha	Zhadano Formation
AzF	Azraa Formation	CHS	Chuy Serie	GdF	Gozdnica Formation	Kik	Kukur Formation	NCF	Nicosia Formation	Srb	Sarban Formation	Zha	Zhadano Formation
BoB	Badghis Beds	CHU	Chabahr Unit	Hez	Hezardareh Formation	KSF	Kafr El Sheikh Formation	Nmf	Nimru Formation	Srr	Sarar Formation	Zha	Zhadano Formation
BAI	Balchi Amara Ignimbrites	Ckb	Conkboyiri Formation	Hnf	Handere Formation	Ksh	Kesh Formation	NNF	Naryn Formation	Sus	Surakhany Suite	Zha	Zhadano Formation
Bai	Baid Formation	DaC	Dana Conglomerate	Hns	Hansag Formation	LoM	Looser Member	NVC	Nagyalfold Clays	TV	Tibesti Volcanics	Zha	Zhadano Formation

DOMAINS

AaB	Alai Basin	AsG	Ashtart Graben	ChB	Chu Sarysu Basin	DkB	Dasht-e-Kavir Basin	EMR	East Mediterranean Basin	HeB	Herat Basin	KbB	Korco Basin	LeA	Lebanon Anticlinorium	MoB	Mesona Basin	PaF	Palmyra Fold-Thrust Belt	SAG	South Aralain Gulf	SpB	Skopje Basin	TiB	Turfan Basin	VIM	Volhynian Massif	BaL	Balaton Line	KZF	Karakunug-Zali Fault	STD	South Tibetan Detachment
AAG	Absehir-Ajyon Graben	ATB	Dashit-e-Lut Basin	ChB	Cankin Basin	DLB	Dashit-e-Lut Basin	EMR	East Mediterranean Basin	HeB	Helicic Trench	KbB	Korco Basin	LeB	Levant Basin	MoP	Moesana Platform	PdD	Paleo-Dniestr Delta	SAG	Saharan Platform	SPT	South Pamir Terrane	TGB	Tuz-Gulu Basin	WBB	Western Black-Sea Basin	BaL	Bitlis Thrust Zone	KZF	Kazerum Fault	Tef	Terskey Fault
ACM	Alghan Central Mountains	AB	Antalya Basin	CIB	Cicia Basin	DB	Dalabite Range	EPR	Eastern Pontides Range	HFB	Himalayan Foreland Basin	KbB	Korco Basin	LeB	Levant Basin	ME	Malta Escarpment	SaP	Sahabi River	SaR	Sarandaj-Sarjan Range	TiB	Tethyan Himalayan Thrust Belt	WCM	Western Carpathian Massif	ChF	Chaman Fault	MKT	Main Karakoram Thrust	Tef	Tajik-Fergana Fault	YGF	Yakapinar-Goksun Fault
ADB	Adana Basin	ATJ	Afr Triple Junction	Cnr	Corinth Rift	DNB	Danakil Block	ERH	Eratosthes High	HKR	Hindu Kush Range	KFB	Karlik Foreland Basin	LIR	Lattakia Ridge	MP	Malta Platform	SBG	Sub-Balkan Graben	SsR	Sistan Fold-Thrust Belt	ThB	Thrace Basin	WER	Western Iranian Plateau	CH	Chaman Fault	MCT	Main Central Thrust	Tef	Tajik-Fergana Fault	ZDF	Zagros Deformation Front
AGP	Al-Ghab Pull-Apart Basin	ATM	Atyn Tagh Mountains	CNR	Corinth Rift	DNB	Danakil Block	ESE	Eastern Sirt Embayment	HV	Helicic Volcanic Arc	KGR	Kyrgyz Range	Lub	Lut Block	MUR	Murray Ridge	SbT	Sib Trough	SisB	Sistan Basin	WIP	Western Iranian Plateau	DSF	Deh Shir Fault	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
AIR	Alair Range	ATR	Achra-Trialeli Range	CR	Cretan Sea Range	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
AJ	Ajdabiya Trough	BeF	Bengal Fan	CR	Cretan Sea Range	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
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AMB	Alpine Molasse Basin	BRB	Binalud Range	CR	Cretan Sea Range	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
AmB	Armenian Basin	BRB	Binalud Range	CR	Cretan Sea Range	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
AnB	Anza Basin	BRB	Binalud Range	CR	Cretan Sea Range	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
ApB	Apusene High	BRB	Binalud Range	CR	Cretan Sea Range	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
ArR	Arsocher Ridge	CAC	Central Anatolian Complex	CR	Cretan Sea Range	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
AS	Arabian Shield	CAC	Central Anatolian Complex	CR	Cretan Sea Range	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		
ASF	Abdelaziz-Sinjar Fold-Thrust Belt	CBG	Chew Bahr Graben	DIR	Dinarides Ranges	DZ	Dezful Embayment	EIP	Ethiopian Plateau	HNB	Haymana Basin	KKE	Kirkuk Embayment	Luf	Lurestan Fold-Thrust Belt	NSB	Naryn Basin	STF	South Tien Shan Foreland Basin	STL	Salt Range	WTR	Western Taurus Range	DST	Dead Sea Transform	MKT	Main Karakoram Thrust	YGF	Yakapinar-Goksun Fault	ZDF	Zagros Deformation Front		