

STATE GEOLOGICAL MAP OF THE RUSSIAN FEDERATION scale of 1 : 1 000 000

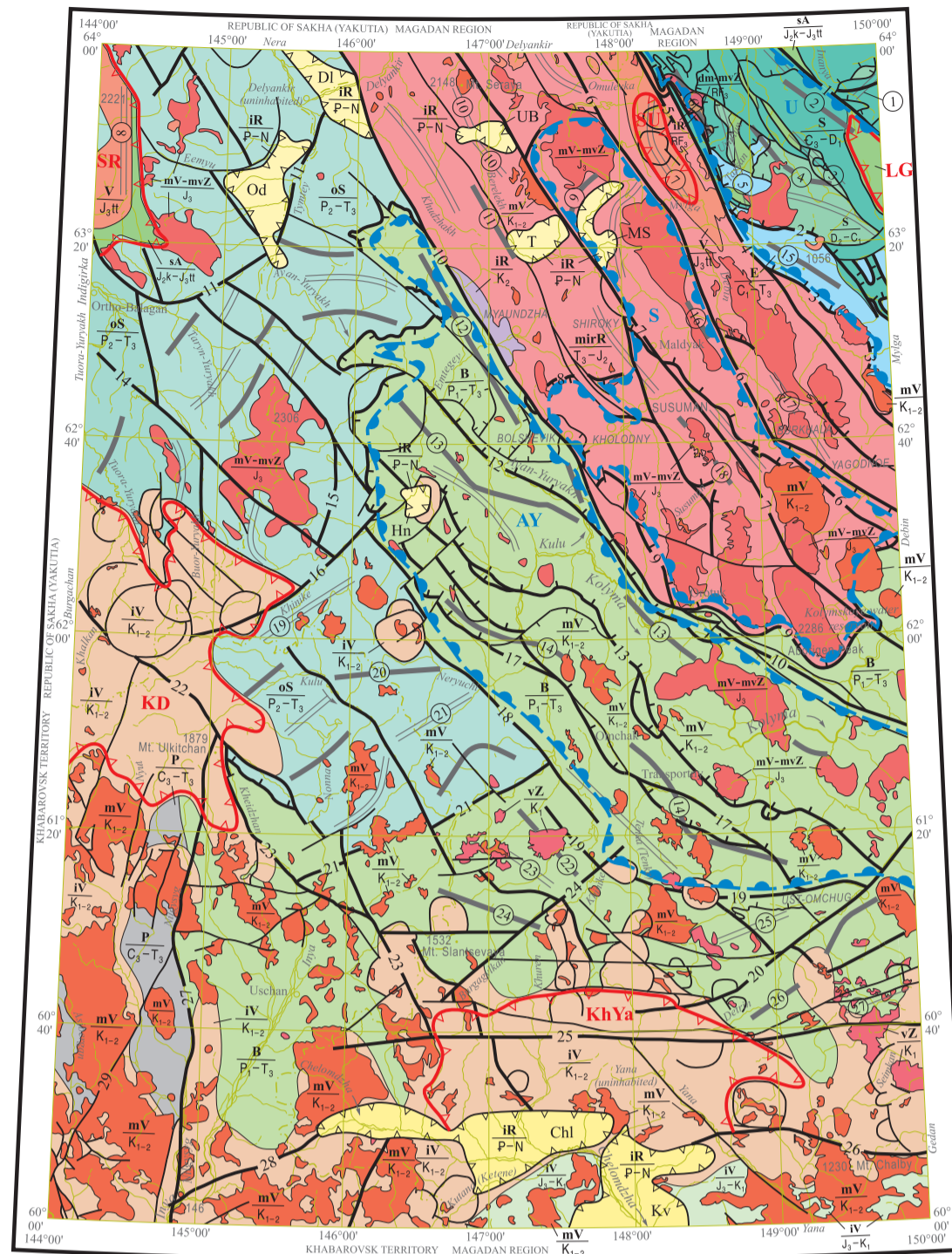
Third generation

VERKHOYANS-KOLYMA SERIES

GEOLOGICAL MAP

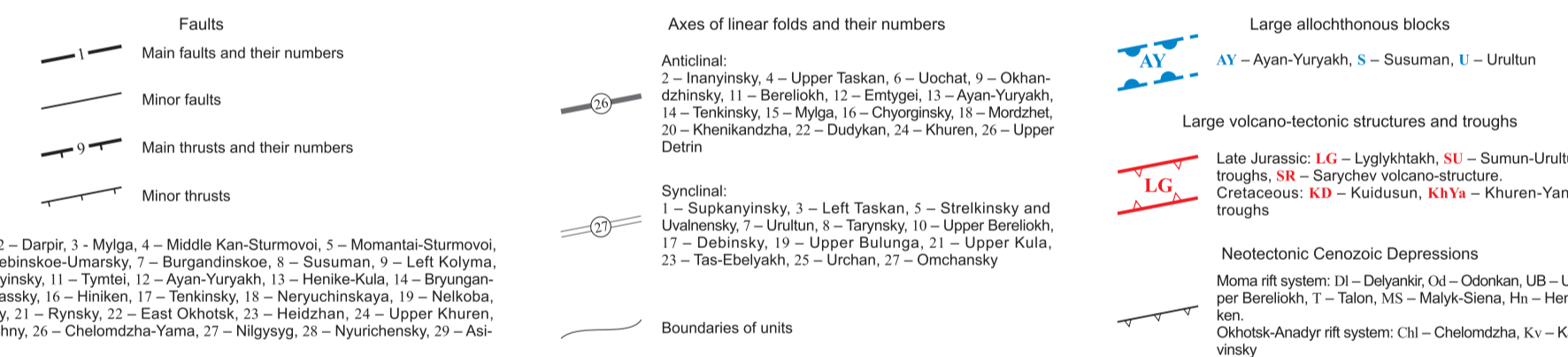
P-55 (Susuman)

TECTONIC SCHEME
Scale 1 : 2 500 000

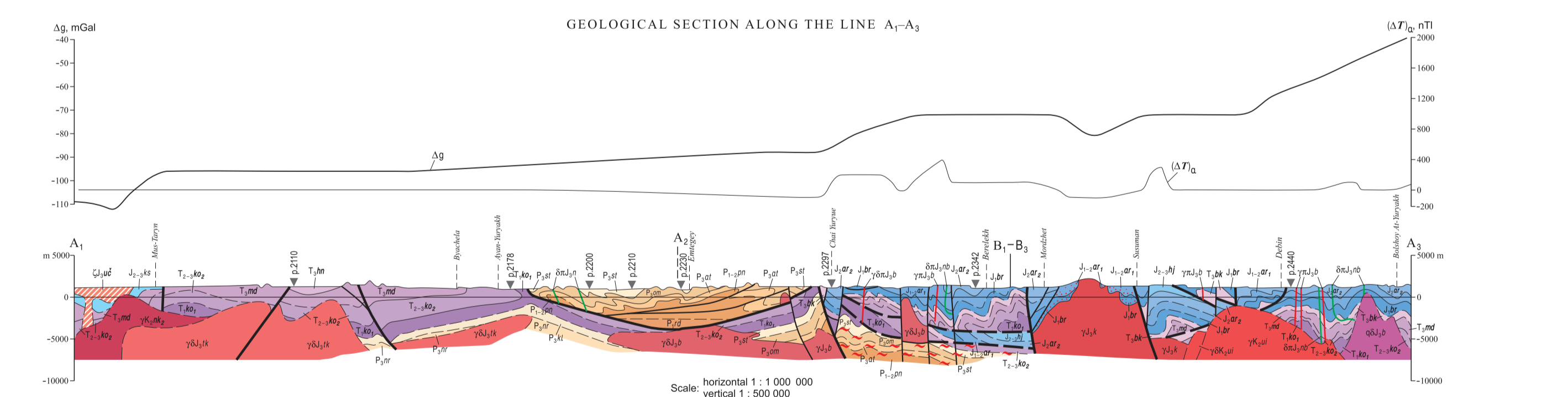


STRUCTURAL STAGES		OVERLAPPING AND CROSS-LINKING COMPLEXES															
Structural stage	Designation	Main Kolyma plutonic belt, Mesozoic and Cenozoic riftogenic depressions				Uryanda-Yasachnaya volcanic belt and Sarychev volcanic structure				Okhotsk-Chukotka and Uda-Murgalsky volcanic and near-Okhotsk plutonic belts							
		Characteristic Geodynamic environment		Characteristic Geodynamic environment		Characteristic Geodynamic environment		Characteristic Geodynamic environment		Characteristic Geodynamic environment		Characteristic Geodynamic environment		Characteristic Geodynamic environment			
Palaeogene-Neogene P-N	IR P-N	Continental sedimentary coal-bearing formations of neotectonic depressions. Continental rift (Moma)								IR P-N		Continental sedimentary coal-bearing formations of neotectonic depressions. Continental rift (Okhotsk-Anadyr)					
Lower-Upper Cretaceous K ₁₋₂	IR K ₁₋₂	Continental sedimentary coal-bearing formations, trachy-basalts, trachyhyolites. Continental rift								IV K ₁₋₂ mV K ₁₋₂		a) Continental sedimentary-volcanogenic formations, two homogenous andesite-rhyolite series (Nurali-Khachunsky, Urynsky - Olsky volcanic complexes); b) Hype granitoids. Suprasubduction active continental margin of Andean type					
Middle, Upper and Lower Cretaceous K ₃₋₄	dm-mvZ K ₃₋₄	Non-penetrated granite-metamorphic dome in thrust autochthon. Collision of continental blocks on destructional continental margin. Undivided granitoids of Hype (Basuginsky, Tas-Kystabyt plutonic complexes) and S-type (high-alumina granites of Kolyma plutonic complex). Suprasubduction magmatic arc of active continental margin, start of collision (?) of orogenic island arc with destructional continental margin				V UJL				mV K ₃₋₄		S-type granitoids (Orchansky granite-leucogranitic plutonic complex). Collision of island arc of Kori-Taigonus system with continental margin. Subaqueous and subaerial sedimentary-volcanogenic formations, homogenous andesite-rhyolite volcanic series (Verinsky and Kurankh-Sala formations, Uliakh-Chizha volcanic group). Mature island arc on a collage of continental blocks					
FOLDED ZONES AND TERRANES																	
Structural stage	Verkhoyansk fold-thrust belt (Allakh-Yun tectonic zone)		Okhotsk cratonic terrane (microcontinent)		Kular-Nera terrane of passive continental margin		Viliginy terrane of backarc basin		Inaly-Debinsky terrane of marginal sea basin		Omulevsky terrane of passive continental margin		Koni-Taigonus island arc terrane				
	Designation	Characteristic Geodynamic environment	Designation	Characteristic Geodynamic environment	Designation	Characteristic Geodynamic environment	Designation	Characteristic Geodynamic environment	Designation	Characteristic Geodynamic environment	Designation	Characteristic Geodynamic environment	Designation	Characteristic Geodynamic environment			
Lower Cretaceous-Upper Jurassic C ₁₋₂	eS P ₁₋₂	Temperous sequences of Verkhoyansk complex. Outer shelf of passive continental margin (P ₁₋₂)	P C ₁₋₂	Continental and coastal marine temperous sequences. Craton block cover (C ₁₋₂)	eS P ₁₋₂	Temperous sequences of Verkhoyansk complex. Outer shelf of passive continental margin (P ₁₋₂)	B P ₁₋₂	Tufo-genic and silty-clayey sequences. Backarc basin of Koni-Taigonus island arc system (P ₁₋₂)	mIR T ₁₋₂	Deep-water silty-clayey and turbidite complexes. Bed of marginal sea (microarc) (T ₁₋₂)	E C ₁₋₂	Tufo-genic-siliceous manganese-bearing sequences, turbidite sequences (Verinsky Group). Continental slope and its foot (C ₁₋₂)	eA P ₁₋₂	Basaltoids, sedimentary-tufo-genic sequences. Primitive island arc (P ₁₋₂)			
Middle Devonian-Lower Carboniferous D ₁₋₂ -C ₁											S D ₁₋₂ -C ₁	Carbonate black shale-carbonate, reefogenic sequences, a stratigraphic break and trachy-basalt covers at the boundary of stages. Passive continental margin with shows of continental rifting (C ₁₋₂ , D ₁₋₂ , C ₁)					
Verkhoyansk Lower Devonian V-B ₁											S C ₁ -D ₁						
Riparian R ₁											dm-mvZ R ₁	S-type granitoids (Uochat magmatic-granite complex). Collision (R ₁)					
											IR R ₁	Sedimentary-volcanogenic sequences, contrasting basalt-rhyolite volcanic series. Continental rift (R ₁)					

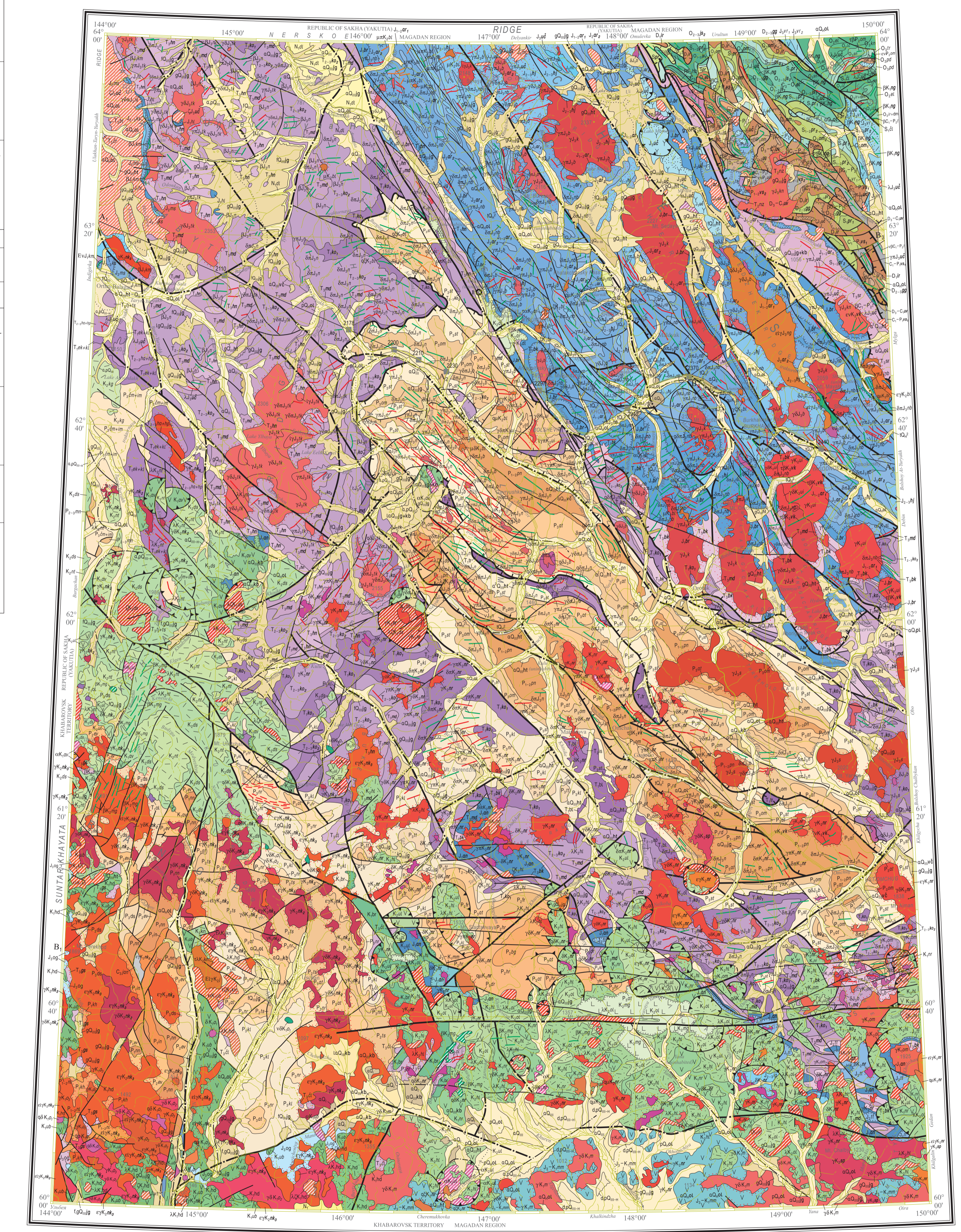
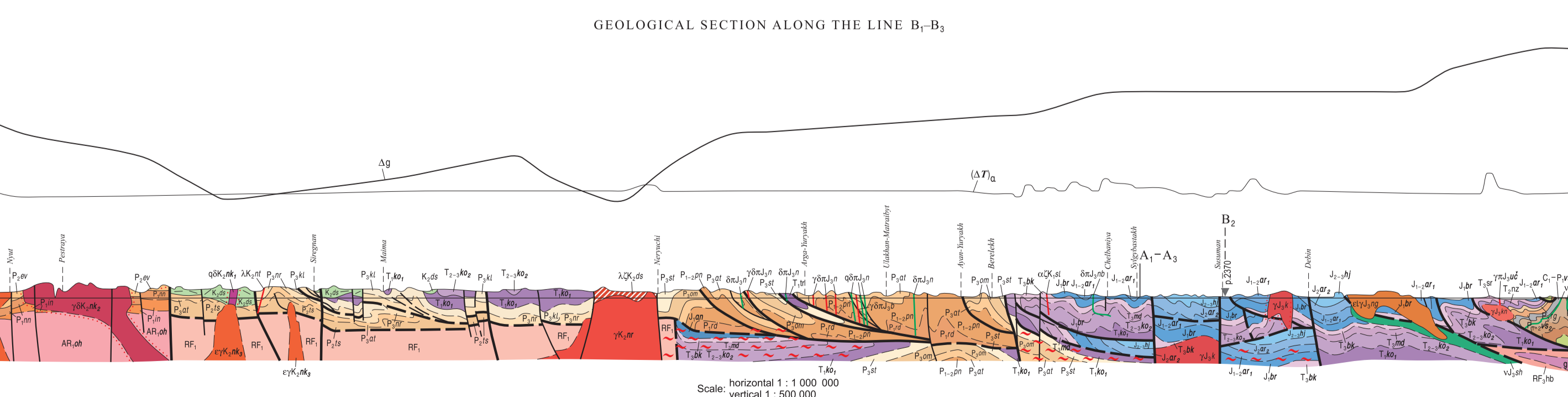
*Non-exposed units



GEOLOGICAL SECTION ALONG THE LINE A₁-A₃



GEOLOGICAL SECTION ALONG THE LINE B₁-B₃



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