

# S T R A T I G R A P H I C C O L U M N S

L-36-VI (Zaporizhzhya); L-37-I (Pology)

General stratigraphic scale										Local stratigraphic subdivisions																																	
Acrotreme	Eozone	Erathe	System	Division	Stage	Regional stratigraphic scale		Index	Lithology	Thickness, m	Description of stratigraphic subdivisions	Column correlation	Index	Lithology	Thickness, m	Description of stratigraphic subdivisions																											
						South area	Central area																																				
PHANEROZOIC	CENOZOIC	KZ	Neogene - N	Miocene - N	Upper - N <sub>1</sub>	Ponichnyy	Novopetskiy	N <sub>1</sub> cb		10	Sequence of red-brown clays. Red-brown, grey clays with gypsum inclusions	Poltavska Series	N <sub>1</sub> cb		11	Sequence of red-brown clays. Red-brown, grey clays with gypsum inclusions, diverse-grained clayey sands																											
								N <sub>1</sub> sg		8	Vasylyvska LTZ Sequence of parti-colored clays. Greenish-grey, brownish-green clays with gypsum and carbonate inclusions, sandy		N <sub>1</sub> sg		8	Pologivska LTZ Sequence of parti-colored clays. Greenish-grey, greenish-brown clays with gypsum and carbonate inclusions																											
								N <sub>1</sub> pv		72	Sequence of sands and limestones. Brick-red, other, brown, clayey sands up to clayey sandstones; greenish-grey calcareous clays; organogenic limestones, with <i>Didacna</i> of <i>Novorossica</i> Barb., <i>Prosoedera littoralis</i> and others. Fine-grained, light-grey, friable sands		N <sub>1</sub> gl		18	Gelikovski layers. Organogenic limestones with <i>Macra caspia</i> Eich., <i>M. bulgarica</i> Toul.																											
								N <sub>1</sub> ak		1.2	Akmanayski layers. Organogenic limestones with <i>Congeria panticapaca</i> Andrus.			N <sub>1</sub> gl		42	Novomoskovski layers. Dark-brown, green, fine-bedded clays with sand and shell detritus interbeds; limestones with <i>Macra fabiana</i> , <i>Cardium fittoni</i> .																										
								PHANEROZOIC	CENOZOIC	KZ	Neogene - N		Miocene - N	Upper - N <sub>1</sub>	Novopetskiy	Novopetskiy	N <sub>1</sub> gl		19	Gelikovski layers. Organogenic limestones with <i>Macra caspia</i> Eich., <i>M. bulgarica</i> Toul.	Poltavska Series	N <sub>1</sub> gl		18	Gelikovski layers. Organogenic limestones with <i>Macra caspia</i> Eich., <i>M. bulgarica</i> ; greenish-grey, carbonate clays with marl interbeds, sands																		
																	N <sub>1</sub> mm-v		23	Novomoskovski and Vasylyvski layers undivided. Organogenic limestones with <i>Macra fabiana</i> , <i>Cardium fittoni</i> and others.		N <sub>1</sub> mm		42	Novomoskovski layers. Dark-brown, green, fine-bedded clays with sand and shell detritus interbeds; limestones with <i>Macra fabiana</i> , <i>Cardium fittoni</i> . Sands with gravel and pebble at the bottom																		
																	N <sub>1</sub> kz-zh		12	Kuzhorski and Zbrukhski layers undivided. Grey, dark-grey, fine-bedded clays; shell detritus interbeds. Molluscs: <i>Ervilia pusilla andrusovi</i> R. S. D., <i>Ervilia desista</i> Eich., <i>Macra eichwaldi crassa</i> R. S. D.		N <sub>1</sub> pp <sub>1</sub>		70	Novopetskiya Suite. Upper sub-suite. Coaliferous clays with brown coal lenses and interbeds; sandy secondary kaolines, diverse-grained, kaolines sands, with gravel and pebble at the bottom. Palynomorphs: <i>Sphagnum</i> , <i>Podocarpus</i> , <i>Pinus</i> , <i>Picea</i> , <i>Cedrus</i> , <i>Myrica</i> , <i>Betula</i> , <i>Salix</i>																		
																	N <sub>1</sub> sr-ka		12	Sartaganski and Konkski layers undivided. Greenish-grey clays, limestone lenses. Molluscs: <i>Parvulus konkensis</i> , <i>Ervilia pusilla trigonala</i>			N <sub>1</sub> pp <sub>1</sub>		25	Novopetskiya Suite. Middle sub-suite. Quartz, light-grey to white, micro-fine-grained sands with shell imprints. Molluscs: <i>Dentatium</i> sp., <i>Cardium</i> sp., <i>Loripes</i> sp., <i>Chlamys</i> sp.																	
																	PHANEROZOIC	CENOZOIC	KZ	Neogene - N		Miocene - N	Middle - N <sub>2</sub>	Novopetskiy	Novopetskiy	N <sub>2</sub> kr		17	Kartvelski layers. Green, emerald clays with marl interbeds. Molluscs: <i>Ervilia</i> ex. gr. <i>pusilla</i> Phil., <i>Potamides</i> ex. gr. <i>mitralis</i> Eichw.	Poltavska Series	N <sub>2</sub> kr		74	Yalynska sequence. Brown coal, coaliferous clays and sands; coarse intercalation of clayey, kaolines sandstones with secondary kaolines and sandy clay; coarse-grained sands with gravel and pebble. Rock color is light-grey with lil, violet spots. Palynomorphs: <i>Gleichenia</i> , <i>Sphagnum</i> , <i>Pinus</i> , <i>Picea</i> , <i>Cedrus</i> , <i>Sequoia</i> , <i>Palmae</i>									
																										N <sub>2</sub> ok		14	Chokratski layers. Greyish-green, sandy clays. Aleurites with glauconite; diverse-grained sands with gravel and pebble. Molluscs: <i>Arca turonica</i> Dal., <i>Ervilia praepodolica</i> Andrus		P <sub>3</sub> jl		210	Reshetlyvska sequence. Brown coal, clays and coaliferous sands. Coarse intercalation of clayey or kaolines sandstone beds with secondary kaolines and clays. Coarse-grained sands with gravel and pebble. Rock color is greenish. Palynomorphs: <i>Castanea crenataeformis</i> , <i>Myrica esculentiformis</i> , <i>Pinus bicornis</i> , <i>Podocarpus giganteus</i> , <i>Sequoia</i> , <i>Taxodium</i>									
N <sub>2</sub> tm		4	Tomakivski layers. Greenish-grey, sandy clays; diverse-grained sands with <i>Ostrea digitalina</i> Dub., <i>Chlamys domgeri</i> Mich.	P <sub>3</sub> st		54	Kyivska Suite. Glauconite-quartz, clayey sands; sandy clays; aleurites with sponge spicula. Molluscs: <i>Arca sulcicosta</i> Nyst., <i>Pectunculus</i> sp., <i>Cardium tumida</i> Koen.																																				
PHANEROZOIC	CENOZOIC	KZ	Neogene - N		Miocene - N	Lower - N <sub>3</sub>	Novopetskiy					Novopetskiy														P <sub>3</sub> as		15	Askaniyska Suite. Greenish-grey, sandy, other clays. Palynomorphs: <i>Polypodiaceae</i> , <i>Gleichenia</i> , <i>Taxodiaceae</i> , <i>Carpinus</i>		Kharivska Series	P <sub>3</sub> jl		74	Yalynska sequence. Brown coal, coaliferous clays and sands; coarse intercalation of clayey, kaolines sandstones with secondary kaolines and sandy clay; coarse-grained sands with gravel and pebble. Rock color is light-grey with lil, violet spots. Palynomorphs: <i>Gleichenia</i> , <i>Sphagnum</i> , <i>Pinus</i> , <i>Picea</i> , <i>Cedrus</i> , <i>Sequoia</i> , <i>Palmae</i>								
				P <sub>3</sub> sr																							15	Sirogozka Suite. Grey, aleuritic clays with glauconite. Molluscs: <i>Corbula sokolovi</i> , <i>Cardium cerastoderma serotocum</i> N. S. O. V.	P <sub>3</sub> st				54	Kyivska Suite. Glauconite-quartz, clayey sands; sandy clays; aleurites with sponge spicula. Molluscs: <i>Arca sulcicosta</i> Nyst., <i>Pectunculus</i> sp., <i>Cardium tumida</i> Koen.									
				P <sub>3</sub> ml																							8	Molochanska Suite. Grey, carbonate, aleuritic clays. Ostracoda: <i>Disopontocypris oligocena</i> (Zalanyi)				P <sub>3</sub> st		54	Kyivska Suite. Glauconite-quartz, clayey sands; sandy clays; aleurites with sponge spicula. Molluscs: <i>Arca sulcicosta</i> Nyst., <i>Pectunculus</i> sp., <i>Cardium tumida</i> Koen.								
				PHANEROZOIC				CENOZOIC	KZ	Neogene - N	Miocene - N		Lower - N <sub>3</sub>	Novopetskiy	Novopetskiy	P <sub>3</sub> bs										35	Borysfenska Suite. Grey, greenish-grey, aleuritic clays. In the middle part - calcareous. At the bottom - manganese ores, diverse-grained sands with glauconite, gravel and pebble. Molluscs: <i>Nacula compta</i> Goldf., <i>Lucina batalschichina</i> K. O. R. b. and others	Kharivska Series	P <sub>3</sub> st					54	Kyivska Suite. Glauconite-quartz, clayey sands; sandy clays; aleurites with sponge spicula. Molluscs: <i>Arca sulcicosta</i> Nyst., <i>Pectunculus</i> sp., <i>Cardium tumida</i> Koen.								
																P <sub>3</sub> al										16	Almynska Suite. Carbonate aleurites with glauconite, with molluscs: <i>Chlamys biarriz</i> Arch., <i>Var. subtripartita</i> Arch. and others		P <sub>3</sub> st				54	Kyivska Suite. Glauconite-quartz, clayey sands; sandy clays; aleurites with sponge spicula. Molluscs: <i>Arca sulcicosta</i> Nyst., <i>Pectunculus</i> sp., <i>Cardium tumida</i> Koen.									
																P <sub>3</sub> ad										54	Khadzhybeyska Suite. Marls, carbonate clays with fauna imprints, diverse-grained sands with glauconite, gravel and pebble. Molluscs: <i>Pocoides contortus</i> Defrance, <i>Ukrainica K. L. u. c. h. n.</i> , <i>Leda crispata</i> Koenen, <i>Var. ukrainica</i> S. O. k. and others					P <sub>3</sub> st		54	Kyivska Suite. Glauconite-quartz, clayey sands; sandy clays; aleurites with sponge spicula. Molluscs: <i>Arca sulcicosta</i> Nyst., <i>Pectunculus</i> sp., <i>Cardium tumida</i> Koen.								
																PHANEROZOIC					CENOZOIC					KZ	Neogene - N		Miocene - N				Lower - N <sub>3</sub>	Novopetskiy	Novopetskiy	P <sub>3</sub> pg		55	Sequence of sands and clays. Brown coal, sands, coaliferous clays, secondary kaolin, alternating sands, clays and secondary kaolines. Sands with gravel at the bottom. Palynomorphs: <i>Palmae</i> , <i>Myrica</i> , <i>Myrtaceae</i>	Kharivska Series	P <sub>3</sub> st		54
																	P <sub>3</sub> pn		16	Batch of green sands. Quartz-glauconite sands, gravel. Palynomorphs: <i>Taxodiaceae</i> , <i>Myrtaceae</i> , <i>Castanea</i> sp.		P <sub>3</sub> st		54	Kyivska Suite. Glauconite-quartz, clayey sands; sandy clays; aleurites with sponge spicula. Molluscs: <i>Arca sulcicosta</i> Nyst., <i>Pectunculus</i> sp., <i>Cardium tumida</i> Koen.																		
																	PHANEROZOIC	CENOZOIC	KZ	Neogene - N			Miocene - N	Lower - N <sub>3</sub>	Novopetskiy					Novopetskiy		K <sub>1</sub> ol					24	Oleksandrivska Suite. Marls, marls, silica-clay-like sandstones. Foraminifera: <i>Anomalina eckloni</i> Brotz., <i>Cibicides betta</i> (Marss.) and others	Kharivska Series		K <sub>1</sub> ol		36
																						K <sub>1</sub> st														46	Staromlynivska Suite. Chalk-like marls with flint, chalk lenses. Foraminifera: <i>Fraebulmina ventricosa</i> (Brotzen), <i>Spirobolvinia vitilis</i> Woloschyna and others	K <sub>1</sub> st				55	Staromlynivska Suite. Marls, marlous sandstones. Foraminifera: <i>Discorbia scania</i> Brotzen, <i>Rotalia calcariformis medeora</i> Plotnicova, <i>Fraebulmina ventricosa</i> (Brotzen)
K <sub>1</sub> bd		10	Berdianska Suite. Chalk-like marls, chalk. Molluscs: <i>Inoceramus involutus</i> (S. O. W.) and others		K <sub>1</sub> st		55					Staromlynivska Suite. Marls, marlous sandstones. Foraminifera: <i>Discorbia scania</i> Brotzen, <i>Rotalia calcariformis medeora</i> Plotnicova, <i>Fraebulmina ventricosa</i> (Brotzen)																															
PHANEROZOIC	CENOZOIC	KZ	Neogene - N			Miocene - N	Lower - N <sub>3</sub>					Novopetskiy										Novopetskiy									K <sub>1</sub> gn					85	Genicheska Suite. Marls with flint concretions, silica clays, sands and sandstones with glauconite and phosphorites, gravelites. Foraminifera: <i>Epionides concinnus</i> (Brotzen), <i>Brotzenella belorussica</i> (A. K. i. m.)	Kharivska Series			K <sub>1</sub> st		55
					K <sub>1</sub> ls																											20				Lysogorska Suite. Quartz sands with glauconite, with gravel at the bottom. Foraminifera: <i>Palumula landoniana</i> (O. R. b.), <i>Guridimoides subconicus</i> (Vassilenko) and others	K <sub>1</sub> st					55	Staromlynivska Suite. Marls, marlous sandstones. Foraminifera: <i>Discorbia scania</i> Brotzen, <i>Rotalia calcariformis medeora</i> Plotnicova, <i>Fraebulmina ventricosa</i> (Brotzen)
				K <sub>1</sub> pk				50	Clayey-sandy batch. Quartz sands, in places coaliferous, with gravel and pebble at the bottom; secondary kaolines, coaliferous clays. Palynomorphs: <i>Gleicheniaceae loetus</i> B. O. l. c. h., <i>Plicifera delicata</i> (B. O. l. c. h.), <i>Cedrus</i> sp., <i>Seleginella candata</i>	K <sub>1</sub> st			55	Staromlynivska Suite. Marls, marlous sandstones. Foraminifera: <i>Discorbia scania</i> Brotzen, <i>Rotalia calcariformis medeora</i> Plotnicova, <i>Fraebulmina ventricosa</i> (Brotzen)																													
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										K <sub>1</sub> st																					46	Staromlynivska Suite. Chalk-like marls with flint, chalk lenses. Foraminifera: <i>Fraebulmina ventricosa</i> (Brotzen), <i>Spirobolvinia vitilis</i> Woloschyna and others				K <sub>1</sub> st						55	Staromlynivska Suite. Marls, marlous sandstones. Foraminifera: <i>Discorbia scania</i> Brotzen, <i>Rotalia calcariformis medeora</i> Plotnicova, <i>Fraebulmina ventricosa</i> (Brotzen)
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																	K <sub>1</sub> ls		20	Lysogorska Suite. Quartz sands with glauconite, with gravel at the bottom. Foraminifera: <i>Palumula landoniana</i> (O. R. b.), <i>Guridimoides subconicus</i> (Vassilenko) and others			K <sub>1</sub> st		55		Staromlynivska Suite. Marls, marlous sandstones. Foraminifera: <i>Discorbia scania</i> Brotzen, <i>Rotalia calcariformis medeora</i> Plotnicova, <i>Fraebulmina ventricosa</i> (Brotzen)																
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				K <sub>1</sub> ls			20	Lysogorska Suite. Quartz sands with glauconite, with gravel at the bottom. Foraminifera: <i>Palumula landoniana</i> (O. R. b.), <i>Guridimoides subconicus</i> (Vassilenko) and others	K <sub>1</sub> st				55	Staromlynivska Suite. Marls, marlous sandstones. Foraminifera: <i>Discorbia scania</i> Brotzen, <i>Rotalia calcariformis medeora</i> Plotnicova, <i>Fraebulmina ventricosa</i> (Brotzen)																													
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