APPENDIX 1

Stratigraphic distribution of important phytoplankton taxa in the Yantarny P-1 borehole section

Sample number/Taxon	Spinidinium echinoideum	Phanerodinium veligerum	Hafniasphaera cf. septata	Alterbidinium circulum	Isabelidinium viborgense	Isabelidinium cooksoniae	Isabelidinium bujakii	Chattangiella	cf. Pyxidiella	Palaeotetradinium silicorum	cf. Laciniadinium	Fromea	Spinidinium clavum	Alisocysta marginata	Odontochitina	Palambages morulosa	Apteodinium	Paucilobimorpha incurvata	Spinidinium	Tectatodinium	Hystrichosphaeridium tubiferum	Membranosphaera	Spiniferites ramosus	Senoniosphaera inornata	Fibrocysta ovalis	Senoniosphaera cf. rotundata	Fibradinium annetorpense	Glaphyrocysta ordinata	Areoligera	Melitasphaeridium	Operculodinium	Caligodinium aceras	cf. Cladopyxidium	Cerodinium diebelii	Achomosphaera crassipellis	Cerodinium striatum	Palaeotetradinium minusculum	Cerodinium speciosum	cf. Dinogymnium	cf. Paralecaniella	Cordosphaeridium funiculatum	Alisocysta
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Sample number/Taxon	Damassadinium cf. californicum	Chattangiella cf. tripartita	Glaphyrocysta	Cordosphaeridium inodes	cf. Membranilarnacia	Oligosphaeridium	Subtilisphaera	Paucilobimorpha triradiata	Deflandrea phosphoritica	Isabelidinium	Fibradinium	Deflandrea cf. denticulata	cf. Microdinium	Impagidinium	Spinidinium cf. densispinatum	Cerodinium	Deflandrea oebisfeldensis	Florentinia	Glaphyrocysta cf. pastielsii	Areoligera senonensis	Paucilobimorpha apiculata	Hystrichocolpoma	Charlesdowniea clathrata	Batiacasphaera	Cordosphaeridium minimum	Achomosphaera alcicornu	Spiniferella cornuta	Spiniferites pseudofurcatus	Phthanoperidinium	Microdinium cf. ornatum	Palaeocystodinium golzowense	Rottnestia borrusica	Melitasphaeridium	Pentadinium laticinctum	Nematosphaeropsis cf. reticulensis	Corrudinium incompositum	Spiniferites	Charlesdowniea	Enneadocysta pectiniformis	Cymatiosphaera punctiferus	Cymatiosphaeropsis	Cordosphaeridium fibrospinosum
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Sample number/Taxon	Cymatiosphaera radiata	cf. Cerodinium	Hystrichocolpoma rigaudiae	Lingulodinium machaerophorum	Thalassiphora pelagica	Cymatiosphaeropsis imitatus	Phthanoperidinium crenulatum	Cerodinium cf. speciosum	Charlesdowniea coleotrypha	Thalassiphora delicata	Rhombodinium	Kallosphaeridium brevibarbatum	Chytreisphaeridia parva	Areosphaeridium diktyoplokum	Hystrichocolpoma cinctum	Samlandia chlamydophora	Homotryblium abbreviatum	Cystidiopsis	Cymatiosphaera	Oligosphaeridium complex	Homotryblium tenuispinosum	Gochtodinium	Deflandrea heterophlycta	Rhombodinium porosum	Heteraulacacysta cf. porosa	Pterospermella helios	Areosphaeridium michoudii	Melitasphaeridium pseudorecurvatum	Cordosphaeridium gracilis	Glaphyrocysta semitecta	Cystidiopsis conicus	Caligodinium	Cerebrocysta cf. bartonensis	Impagidinium cf. dispertitum	Rhombodinium cf. romboideum	Cordosphaeridium cf. minimum	Dapsilidinium simplex	Hystrichocolpoma eisenackii	Sigmopollis	cf. Systematophora	Thalassiphora fenestrata	Age/Dinocyst zones
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R – redeposited taxa; + – *in situ* taxa according to the first appearance in the profile (FO - first occurrence)