F.T. Bowyer, A. Yu Zhuravlev, R. Wood, F. Zhao, S.S. Sukhov, R.D. Alexander, S.W. Poulton, and M. Zhu, 2022, Implications of an integrated late Ediacaran to early Cambrian stratigraphy of the Siberian Platform, Russia: GSA Bulletin, https://doi.org/10.1130/B36534.1.

Supplemental Material

Supplemental Text

Figures S1–S7. Stratigraphic correlation charts for the Siberian Platform.

Table S1. Samples collected by Maoyan Zhu and Fangchen Zhao. Samples analysed at the State Key Laboratory of Palaeobiology and Stratigraphy, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences.

Supplemental Text

1. Carbonate isotope analyses

Sampling was undertaken at three sections on the Yudoma River, Republic of Sakha (Yakutia), Russia in 2015 by MZ, AZ, SS, FZ, and RW. Sampled sections are located at the Yudoma-Maya confluence (YM, 59°9'16.20"N, 135°13'37.50"E), Nuuchchalakh Valley (NV, 59°25'8.94"N, 136°15'9.78"E), and Kyra-Ytyga River mouth (KY, 59°24'48"N 136°54'15"E) (Figs. 3, S7). Carbon isotope chemostratigraphy for KY was previously published in Zhu et al. (2017).

Carefully selected micritic carbonate was microdrilled from hand samples and simultaneously analysed for $\delta^{13}C_{carb}$ and $\delta^{18}O_{carb}$. Samples collected by MZ and FZ were analysed on a Thermo Scientific MAT-253 mass spectrometer, using a Kiel IV Carbonate Device at the State Key Laboratory of Palaeobiology and Stratigraphy, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences. New $\delta^{13}C_{carb}$ data from the Yudoma River sections are reported in per mil (‰) notation relative to the Vienna Pee Dee Belemnite (VPDB) (Table S1). Standard deviation of replicate analyses was better than 0.03‰ for $\delta^{13}C_{carb}$ and 0.08‰ for $\delta^{18}O_{carb}$ based on the national standard of China (Reference number GBW 04405). Carbonate samples collected by AZ and RW were analysed on an Elementar PRECISION stable isotope ratio mass spectrometer following reaction with 100% orthophosphoric acid at 75°C, using an Elementar iso FLOW system at the Wolfson Laboratory, School of Geosciences, Grant Institute, University of Edinburgh. Samples of dolomite cemented siltstone were also collected by AZ and RW for geochemical analysis (triangular data points in Fig. 3D). All samples had sufficiently high carbonate content to be analysed using the conventional analytical methods described above. The standard deviation (n=48) of a powdered coral laboratory standard (COR1D, $\delta^{13}C$= -0.649‰, $\delta^{18}O$= -4.924‰) run as a sample on the same days as the study samples, was ± 0.074‰ for $\delta^{13}C$ and ± 0.111‰ for $\delta^{18}O$. All isotopic values are reported relative to the composition of Vienna Pee Dee Belemnite (VPDB).

2. Detailed bed-by-bed descriptions of studied sections YM, NV and KY

Yudoma-Maya confluence section (YM).

Left bank of the Maya River, against the Yudoma River mouth.

Described herein.

Aim Fm

0. Dark-grey unevenly wavy-laminated thin-bedded dolomudstone with scarce quartz grains and slope folds; thickness — 3.6 m.
1. Dark- to light-grey lens-like alteration (lenses up to 0.3 m thick) of dolomitic grainstone, consisting of broken acicular crystals of primary marine cement, and packstone cemented by white dolomitic crust and stylolitised; thickness — 2.8 m.
2. Grey dolomitic grainstone to pebblestone with thick white dolomitic crusts between grains and flat pebbles; thickness — 0.1 m.
3. Dark-grey unevenly thin-bedded dolomudstone; thickness — 1.0 m.
4. Grey dolomitic grainstone to pebblestone; thickness — 0.3 m.
5. Dark-grey unevenly wavy-laminated thin-bedded dolomudstone with large cement botryoids encrusting bedding surfaces; thickness — 0.9 m.
6. Dark-grey dolomitic grainstone to pebblestone with thick white dolomitic crusts between grains; thickness — 0.1 m.
7. Black wavy-laminated thinly-bedded siltstone with wrinkled bacterial mats covering bedding surfaces; some layers are folded forming a relief of several cm in thickness; thickness — 2.2 m.
8. Yellowish-green finely-bedded siltstone with “elephant skin” textures and dense settlements of *Beltanelliformis brunsae* up to 0.7–0.8 cm in diameter, common *Palaeopascichus renarius*, and sparse *Aspidella terranovica* on the bedding surfaces; thickness — 0.3 m.
9. Black wavy-laminated finely-bedded siltstone with flat lenses of grey coarser material and wrinkled bedding surfaces; thickness — 0.9 m.
10. Black coarse-grained sandstone of highly varying thickness; thickness — 0.02–0.1 m.
11. Black wavy-laminated finely-bedded siltstone with flat lenses of grey coarser material and white small (up to 0.1 m long) lenses of flat pebbles; thickness — 1.5 m.

12. Light-grey dolomudstone with sparse ooids passing upwards into oolitic packstone with interbeds of dark-grey dolomudstone containing cement botryoids; thickness — 0.8 m.
13. Dark- to light-grey cross-laminated chevron-like dolomitic packstone consisting of oncoids and shells, mostly as broken fragments, of *Suvorovella aldanica* (including *Majaella verkhojanica*) and lenses of quartz grains. Shells are cemented by white dolomitic crust. Karstic sinks (up to 0.10–0.15 m in depth) penetrate the upper surface of the bed and are filled with yellowish-white thin-bedded fine-grained quartzose sandstone cemented by carbonate; thickness — 1.5–2.3 m.
14. Light-grey cross-laminated dolomudstone with admixture of quartz grains and ooids; thickness — 1.5 m.
15. Light-grey massive trough cross-laminated fenestrate dolomudstone with admixture of quartz grains and lenses of oolite packstone; fenestrae probably are formed after carbonate grains; upslope lenses of yellowish-white medium-grained quartzose sandstone appear; thickness — 12.0 m.
16. Yellowish-white massive medium-grained quartzose sandstone consisting of angular grains; thickness — 0.6 m.
17. Greenish-white trough cross-laminated medium-grained quartzose sandstone consisting of rounded grains; thickness — 0.7 m.
18. White massive medium-grained quartzose sandstone consisting of rounded grains and carbonate oncoids; thickness — 1.5 m.

<u>Ust'-Yudoma Fm</u>

19. Grey cross-laminated sandy (quartzose) dolostone; thickness — 15.0 m.
20. Stromatolite boundstone of *Collenia*-type morphology; thickness — 1.0 m
21. Alternation of yellowish-white cross-bedded quartzose sandstone and dark- and light grey wavy-laminated fenestrate dolomitic grainstone containing quartz grains with lenses of flat-pebbled dolomitic conglomerate firmed by silica cement; thickness — 112 m.

Total thickness = 161.2 m.

Nuuchchalakh Valley section (NV).

Right bank of the Yudoma River, opposite to the Kurus Island.

Additional descriptions in:

Semikhatov, M.A., Komar, V.A., and Serebryakov, S.N., 1970, Yudomian Complex of the Stratotypical Area: Geological Institute, USSR Academy of Sciences, Transactions, v. 210, p. 1–207 [in Russian].

Khomentovsky, V.V., 1985, The Vendian of the Siberian Platform. In Sokolov B.S., Fedonkin, M.A., eds. The Vendian System, Historical-Geological and Palaeontological Grounds, v. 2, Stratigraphy and Geological Processes: Moscow, Nauka (English translation: The Vendian System, vol. 2: Regional Geology. Springer, Berlin; Heidelberg, 1990), p. 83–161.

As described herein:

Aim Fm

Overlays with a slightly angular unconformably the Cryogenian Ust'-Kerbi Fm, the upper strata of which are represented by dark reddish-black siltstone with subdued sandstone interlayers.

1. Light-grey and green (orange at the weathered surface) coarse-grained, cross-laminated feldspar-quartzose sandstone with ripple marks and tide cracks at the bedding plane and scalloped surfaces; gravelstone consisting of rounded quartz pebbles entombed in gutter-like troughs occurs at the base (0.1 m thick); dark red silty interbeds are subdued to sandstone ones; thickness — 11.6 m.

2. Dark-grey to black thin-bedded shale with a single interbed of grey wavy-bedded fine-grained feldspar-quartzose sandstone (1 m above the unit base); thickness — 16 m.

   Acritarchs are present: *Leiomarginatasphaera punctulata*, *Granomarginatasphaera judomica*, *Bailikania diligena*, *"Sibiriella" prima*, *Bavlinella faveolata*, *Leiovalia* sp.; *Leiosphaeridia rubiginosa*, *L. minutissima*, *L. minuta*, *Siphonophycus robustum*, *S.*

typicum (Pyatiletov, 1988, pls. 1, 2; names are corrected in accordance with current systematics).

3. Dark-grey to black, wavy-, thin- and medium-bedded, dolomudstone and clotted dolomitic packstone with hummocky bedding planes and with interbeds of black foliated dolomitic mudstone in its upper part (the foliation is due to glossy bacterial films); isometric dome-like structures (1–1.5 m high) are present in the lower metres; thick-bedded varieties start to dominate in the upper part passing into wavy- to cross-laminated sandy dolostone containing black cherts and flint lenses; angular quarts grains are distributed within laminae and start to form small lenses (30 cm in diameter, 3 cm thick) upsection; oncoid dolomitic packstone is common in the topmost strata passing into glauconitic dolostone with flint pebbles (<5 cm in diameter); the uppermost 0.5 m consists of arenaceous dolostone with quarts and glauconite grains; thickness — 38 m.

4. Grey plain-parallel-laminated dolomudstone with lenses of grey medium- and coarse-grained, quartzose dolomitic sandstone, greenish-grey arenaceous glauconitic dolostone and dolomitic breccia; ooid pockets and domal stromatolites (*Boxonia grumulosa*) are common in the upper part; thickness — 0.3–1 m.

5. Alternation of brick-red and greenish-grey flaggy siltstone and greenish-grey (yellowish-grey at the weathered surface) plain-parallel- to wavy-bedded dolomudstone passing upsection into massive silicified dolomudstone with ripple marks on bedding surfaces and dolomitic nodules; thickness — 13.8 m.

6. Blueish-green thin- slightly wavy-bedded argillaceous dolomudstone (yellowish-green at the weathered surface), brecciated in places, with bedding planes teemed with trace-fossil-like chains of *Nenoxites curvus*; thickness — 1.2 m.

7. Greenish-grey polymictic dolomitic sandstone passing into thin alternation of greenish-grey wavy-laminated coarse-grained and black medium-grained sandstone; thickness — 2.5 m.

8. Blueish-green thin- slightly wavy-bedded argillaceous dolomudstone (yellowish-green at the weathered surface) with bedding planes teemed with trace-fossil-like chains of *Nenoxites curvus*; thickness — 5.2 m.

9. Black thin-laminated dolomudstone; thickness — 0.6–0.7 m.

10. Dark-grey thrombolitic (clotted) and columnar stromatolitic (*Jurusania judomica*) dolostone with spaces between mounds infilled by dark ooid dolopackstone and blueish-green argillaceous dolomudstone with *Nenoxites curvus*; thickness — 4.5 m.

11. Black thin-bedded dolomitic limestone (mudstone) with smell of bitumen; thickness — 1–2 m. The top of the unit 11 is uneven, with erosional pockets.

Ust'-Yudoma Fm

12. Intraformational flat-pebble dolomitic breccia at the base (pebbles consist of underlying black limestone) are replaced upsection by lens-like alternation of dark-grey mudstone, white packstone to wackestone with carbonate pebbles and ooid grainstone; thickness — 4 m.

13. Light-grey mostly grainy sucrose fenestral dolostone, commonly cavernous; dark bacterial-type mats, pink mound-like structures bearing white clots and stromatolite-like mounds surrounded by brecciated dolomudstone are also common; thickness — 20 m.

14. Alternation of light-grey wavy-laminated dolomudstone (with small lenses of oncoid dolograinstone and dark bacterial mats forming dome-like structures and slumps) and steeply cross-laminated grainy sucrose dolostone with elongated to slit-like cavities developed along the lamination and filled by early marine fibrous and radial cement of several generations (geopetals contain carbonate grains); thickness — 20 m.

15. Light-grey grainy sucrose fenestral dolostone, commonly cavernous; thickness — 125 m.

16. Yellowish-grey wavy-laminated dolomitic limestone (mudstone and oolitic grainstone); thickness — 15 m. *Anabarites trisulcatus* is found in the member (Khomentovsky, 1985).

/Downslope of the northern flank of the mount comprising the section, greenish- and rose-grey mudstone and wackestone of the Pestrotsvet Formation are excavated in a handmade trench./

Kyra-Ytyga River section (KY).

Right bank of the Yudoma River, 3.7 km upstream the Kyra-Ytyga River mouth.

Additional descriptions in:

Semikhatov, M.A., Komar, V.A., and Serebryakov, S.N., 1970, Yudomian Complex of the Stratotypical Area: Geological Institute, USSR Academy of Sciences, Transactions, v. 210, p. 1–207 [in Russian].

As described herein:

Aim Fm

Overlays the deeply eroded surface the Cryogenian Ust'-Kerbi Fm, the upper strata of which are represented by dark-grey brownish-black thinly cross-laminated sandstone with well-expressed ripple marks on the bedding planes.

1. Reddish-green breccia with flat rounded fragments of the Ust'-Kerbi sandstone; erosional pockets are filled by red thinly-laminated fine-grained sandstone and coarse quartz grains; thickness — 0.2–0.4 m.
2. Rhythmic alternation of greenish to black micro-cross-laminated fine-grained sandstone bearing micro-ripple marks on the bedding surface, of light-grey to white wavy-laminated coarse-grained well-rounded quartzose sandstone with hummocky bedding surface and of dark siltstone with surfaces covered by bacterial elephant-skin textures; these triplets become thinner upsection and chips of reworked black sandstone are present in the top layers; thickness — 16–17 m.
3. Covered interval of 9 m.
4. Rhythmic alternation of more massive thick (0.5 m) and more silty thin (0.1 m) layers of red and green, spotty, finely (submillimetric) wavy- and hummocky-laminated dolomudstone; thin (<1 mm) lenses of transparent silica are present; the unit is terminated with dolomitic breccia of floating angular fragments of the same lithologies; thickness — 8 m.
5. Covered interval of 3–4 m.
6. Light- to dark-grey thinly (submillimetric) wavy-laminated limy and silty dolomudstone enriched with pyrite framboids and forming metre-scale lenses;

upsection, dolostone turns to be darker and plain-parallel-laminated, black calcareous shale and small dark clast appear; thickness — 8 m.

7. Alternation of black fine-grained sandstone and blueish-black thinly plain-parallel-laminated glossy bituminous calcareous shale with wrinkling bedding surface; upsection, shale gradually passes into thinly wavy-laminated black limestone with discontinues laminae; two such cycles are recognised in this unit; thickness — 47–52 m.

   Common bacterial colonies of *Beltanelliformis brunsae* and single trace fossil-like horizontal ribbon ?*Shaanxilithes* sp. are found in the unit.

The upper strata of this unit are truncated by the Ust'-Yudoma Fm light-grey dolostone.

Ust'-Yudoma Fm (note bed thicknesses highly variable due to prograding sequence sets)

8. Light-grey thinly wavy-laminated dolomudstone with dark bacterial mats, some of which are fragmented and redeposited, and thin oolitic dolograinstone interbeds; thickness — 8–16 m.
9. Light-grey massive cavernous dolomudstone with pyrite enrichments, sparse cavities and mound-like structures; thickness — 7–14 m.
10. White large-scale (up to 1 m high) hummocky-laminated vuggy and coarsely-crystallised dolostone with interbeds of clotted dolostone; thickness — 20–40 m.
11. Irregular alternation of dark-grey microlaminated clotted dolomudstone, bearing large (<0.5 cm) pyrite framboids, and grey dolomudstone containing dark bacterial mats, which form stromatolite-like dome-shaped structures bearing sheltered cavities filled with early marine fibrous and radial dolomite cement; thickness — 41–80 m.
12. Intraformational dolomitic breccia consisting of flat angular dolostone (mostly bacterial crust) fragments and oncoid dolograinstone (oncoids are large, <5 cm); thickness — 4–8 m.
13. Light-grey microlaminated clotted dolomudstone bearing dark bacterial mats; thickness — 10–20 m.
14. Light-grey thinly-laminated limestone (mudstone) and dolomudstone alternation with synsedimentary cracks overlain by small (10 cm thick to 10 cm wide) isometric stromatolites (*Gongylina nodulosa*) bearing intraclasts entombed into laminae and with oncoid packstone; thickness — 14–40 m.

The following SSFs *Cloudina* ex gr. *riemkeae*, over cloudinids, *Anabarites trisulcatu, A. valkovi*, and dolomitised megasphaeromorph acritarch envelopes are detected.

15. Yellowish-white massive grainy dolostone; thickness — 13–37 m.

16. Light-grey thrombolite-like dolomitic mounds with cavities filled by oncoids forming within the cavities and dark-grey dolomitic stromatolites and dolomicrite; thickness — 14 m.

    The following SSFs *Anabarites trisulcatus*, *A. latus*, *A. hexasulcatus*, and *Cambrotubulus decurvatus* are detected.

17. Light- and dark-grey thinly laminated limestone (mudstone) with small lenses of shelly wackestone and grainstone and large (ca. 1 cm in diameter) hyolith conch fragments, in places penetrated by vertical U-shaped trace fossils (*Diplocraterion* sp.); thickness — 14 m.

    The following SSFs *Anabarites trisulcatus*, *A. latus*, *A. natellus*, *A. tripartitus*, *Aculeochrea composita*, *Cambrotubulus decurvatus* (anabaritids); cloudinids; and *Protohertzina unguliformis* (protoconodont) are found 8 m below the top.

    Further SSFs *Anabarites trisulcatus*, *Cambrotubulus decurvatus* (anabaritids); *Protohertzina ?anabarica*, *Fomitchella acinaciformis*, *F. infundibuliformis* (protoconodonts); *Halkieria* sp., *Sachites* sp. (halkieriids); chancelloriid; siphogonuchitid; *Hyolithellus tenuis* (hyolitheminth), and *Allatheca* sp. (hyolith) are detected 4.7 m below the top.

3. Detailed bed-by-bed descriptions of additional sections of the Uchur-Maya Plate

Khomentovsky, V.V., and Karlova, G.A., 1991, New data on the correlation of Vendian-Cambrian strata in the eastern and transitional facies regions of southern Yakutia, *in* Khomentovsky, V.V., ed., Late Precambrian and Early Palaeozoic of Siberia. Siberian Platform and Its Borderland: Novosibirsk, United Institute of Geology, Geophysics and Mineralogy, Siberian Branch, USSR Academy of Sciences, p. 3–44 [in Russian].

1) Gynym River section 86–87 (p. 5–10, fig. 2):

Ust'-Yudoma Fm

1. Member II. Alternation of light-grey massive and thick-bedded stratiform stromatolitic and crystallized cavernous dolostone (25 m).

2. Member III. Light-grey massive and thick-bedded, in places dome-like and loaf-like stromatolitic and ooilitic, dolostone with a few interbeds of fine-grained platy dolostone (25–30 m).

3. Member IV. Yellowish-, pinkish- and greenish-grey thin-bedded and fine-grained, commonly argillaceous, dolostone (12 m) followed by white medium- to thick bedded dolostone with uneven bedding plain and silica lenses (11 m). In places, the upper part consists of large dolomitic ooids forming loaf-like bodies within thin-bedded dolostone.

Pestrotsvet Fm

The contact is marked by an iron-rich weathered surface of the Ust'-Yudoma Fm.

4. Sunnagin Member

   Grey to brownish-grey dolostone with abundant glauconite grains (4 m). SSF assemblage includes *Torellella lentiformis, Hyolithellus* (hyolithelminthes), *Aldanotreta* (brachiopod), chancelloriid, *Halkieria* (halkieriids).

5. Brownish thin-bedded argillaceous and limy dolostone with interbeds of light limestone, which become dominating upsection (ca. 70 m).

Khomentovsky, V.V., Val'kov, A.K., Karlova, G.A., and Nuzhnov, S.V., 1983, Key section of transitional Precambrian-Cambrian strata in the lower Gonam River, *in* Khomentovsky, V.V., ed., Late Precambrian and Early Palaeozoic of Siberia. Vendian Strata: Novosibirsk, Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, p. 24–36 [in Russian].

Val'kov, A.K., 1983, Fauna from transitional Vendian-Cambrian strata in the lower Gonam River, *in* Khomentovsky, V.V., ed., Late Precambrian and Early Palaeozoic of Siberia. Vendian Strata: Novosibirsk, Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, 37–48 [in Russian].

Val'kov, A.K., and Karlova, G.A., 1984, Fauna from transitional Vendian-Cambrian strata in the lower Gonam River, *in* Khomentovsky, V.V., ed., Stratigraphy of the Late Precambrian and Early Palaeozoic. Middle Siberia: Novosibirsk, Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, p. 12–41 [in Russian].

2) Gonam River section:

On the deeply eroded surface of the Lower Riphean /Comment: Mesoproterozoic/.

Aim Fm

1. Yellowish-grey coarse-grained quartzose sandstone with glauconite grains followed by an alternation of grey quartzose sandstone and sandy dolostone (ca. 10 m).
2. Brownish-grey dolostone with bitumen smell (21 m).

Ust'-Yudoma Fm

Contact eroded.

3. Member II. Light-grey quartzose sandstone with dolomitic cement and sandy dolostone (3-5 m). /Comment: No Member I is indicated, but this formation is subdivided into 4 members in Fig. 2 of Khomentovsky & Karlova (1993)./
4. Light-grey thick-bedded cavernous and ooid dolostone (ca. 25 m).
5. Planar stromatolitic dolostone (13–15 m).

6. Member III. Light- and yellowish-grey coarse-grained and cavernous dolostone with dolomitic breccia, interbedding with greenish-grey fine-grained platy argillaceous dolostone (ca. 60 m).

7. Member IV. Columnar and planar stromatolitic and ooid dolostone interbedded with greenish-grey platy argillaceous dolostone with glauconitic grains (ca. 30 m).

8. Member V. Grey and greenish-grey platy argillaceous dolostone (12.5 m). At the base of this bed, SSFs occur: SSF assemblage includes *Cambrotubulus decurvatus* (anabaritid), *Hyolithellus* cf. *tenuis* (hyolithelminthes), chancelloriids, *Bemella, Igorella, Barskovia, Purella* cf. *antiqua* (molluscs).

9. Grey massive planar stromatolitic dolostone with argillaceous dolostone interbeds and siliceous ooid layers (13 m).

Pestrotsvet Fm

Contact eroded.

Sunnagin Member

10. Greenish-grey sandy glauconitic dolostone with silica lenses (0.03–0.05 m).

11. Light-grey grainy dolostone (0.2 m).

12. Pink massive dolostone (0.4 m).

13. Light-pink massive dolostone with multiple silica lenses (0.15 m).

14. Sandy dolostone with abundant glauconite grains and SSFs (0.1 m). SSFs include: *Torellella lentiformis, T. curvae, Hyolithellus vladimirovae, H. tenuis, H. grandis* (hyolithelminthes), *Aldanotreta sunnaginensis* (brachiopod), chancelloriids, *Halkieria sacciformis, Sachites proboscideus* (halkieriid), *Spinulitheca billingsi, Allatheca concinna, Turcutheca* (hyoliths), *Aldanella sibirica, Bemella septata, B. parula, Barskovia, Igorella, Watsonella* (molluscs), *Coleoloides* cf. *trigeminatus, Coleolus* cf. *trigonus* (coleolids), *Markuelia secunda* (embryo).

15. Greenish-yellowish-grey platy dolostone with rare large shells (0.4 m).

16. Brownish platy argillaceous dolostone (0.15 m).

Total Sunnagin Mb thickness 1.25 m.

Post-Sunnagin Pestrotsvet Fm

17. Reddish argillaceous dolostone (25 m).

18. Archaeocyath-calcimicrobial biohermal dolostone (27 m).

19. Alternation of reddish argillaceous dolostone and white dolostone (12 m).

Tumuldur Fm: Dolostone.

Khomentovsky, V.V., and Karlova, G.A., 1991, New data on the correlation of Vendian-Cambrian strata in the eastern and transitional facies regions of southern Yakutia, *in* Khomentovsky, V.V., ed., Late Precambrian and Early Palaeozoic of Siberia. Siberian Platform and Its Borderland: Novosibirsk, United Institute of Geology, Geophysics and Mineralogy, Siberian Branch, USSR Academy of Sciences, p. 3–44 [in Russian].

3) Berdyakit River section 50 (p. 10–17, fig. 3):

Aim Fm

1. Yellowish-grey and brownish cross-bedded poorly sorted coarse-grained polymictic feldspar-quartzose sandstone and small pebble conglomerate /Comment: Apparent thickness 150 m is not indicated on the figure in Khomentovsky and Karlova (1991)/.

2. Dark-grey thin- to medium-bedded argillaceous dolostone with bitumen smell /the smell appears when the rock is splitting by a hammer and, probably, is produced by rich pyritic sulfur/ and with interbeds of black and greenish-grey dolomitic marlstone, of planar stromatolites and columnar stromatolites, and of oolitic dolostone infilling the space between stromatolites (thickness 35 m).

Ust'-Yudoma Fm

Contact eroded, uneven.

3. Member I. Light-grey fine- to medium (0.5–2 mm)-grained well to poorly sorted quartzose sandstone with rare feldspar grains and dolomitic cement (1.5–2 m).

   Upsection, sandstone is replaced by thin- to medium bedded, commonly oolitic, dolostone with thin sandstone interbeds and lenses (apparent thickness 33–38 m).

4. Member II. Light yellowish-grey thin-bedded argillaceous dolostone (9 m) followed by massive and thick-bedded crystallized cavernous dolostone, which, in places, are replaced with large dolomitic stromatolitic bioherms and ooid lenses in the topmost part; a 4–5 m unit of thin-bedded slightly argillaceous dolostone occurs in the middle part of the member (51 m).

5. Member III. Brownish- and greenish-grey thin-bedded argillaceous fine-grained dolostone (10–12 m) followed by massive and thick-bedded crystallized cavernous dolostone, which, in places, are replaced with stromatolitic and dolostone (26–33 m). The lower, argillaceous, strata contains *Cambrotubulus* (anabaritids), *Protohertzina* (protoconodonts) and chancelloriids.

6. Member IV. Lilac and yellow-bright stripped thin- and medium-bedded argillaceous dolostone with slump folds (12 m) /Comment: The origin of these structures can have a different nature./ followed by light-grey massive and thick-bedded dolostone (15 m).

Pestrotsvet Fm

The contact is marked by an eroded surface of the Ust'-Yudoma Fm with pipes up to 0.2 m deep.

7. Sunnagin Member

   Grey to brownish-grey dolomitic sandstone with abundant glauconite grains and flat pebbles of the Ust'-Yudoma Fm dolostone and grey to dark-grey and yellowish dolostone (2–3.5 m). SSF assemblage includes *Tiksitheca* (anabaritid), *Torellella curvae, Hyolithellus vladimirovae, H. tenuis* (hyolithelminthes), *Aldanotreta sunnaginensis, Tumulduria incomperta* (brachiopods), *Camenella garbowskae* (tommotiid), chancelloriids, *Halkieria* (halkieriid), *Turcutheca, ?Ovalitheca* (hyoliths), *Aldanella crassa, A. sibirica, Bemella jacutica, Oelandiella, Yochelcionella, Barskovia hemisymmetrica, Obtusoconus inpocerus* (molluscs).

   Post-Sunnagin Pestrotsvet Fm

8. Brownish thin-bedded argillaceous dolostone (9 m).

9. Archaeocyath bioherms (7 m).

10. Brownish thin-bedded argillaceous dolostone (20 m).

11. Archaeocyath bioherms (12 m).

12. Frequent alternation of brownish thin-bedded argillaceous limestone and light-grey dolostone (apparent thickness 25 m).

Khomentovsky, V.V., and Karlova, G.A., 1991, New data on the correlation of Vendian-Cambrian strata in the eastern and transitional facies regions of southern Yakutia, *in* Khomentovsky, V.V., ed., Late Precambrian and Early Palaeozoic of Siberia. Siberian Platform and Its Borderland: Novosibirsk, United Institute of Geology, Geophysics and Mineralogy, Siberian Branch, USSR Academy of Sciences, p. 3–44 [in Russian].

4) Chakdala River section 71 (p. 17–20, fig. 4):

Aim Fm

1. Yellowish-grey and brownish cross- and lenticular-laminated poorly sorted coarse-grained polymictic feldspar-quartzose sandstone with quartz well-rounded pebbles up to 1.5 cm in size and dolomitic flat-pebble breccia at the top (apparent thickness 18 m). /Comment: Below this bed a unit of planar dolomitic stromatolites and cross-bedded ooid dolostone interbedded with coarse-grained sandstone of 150 m thickness is exposed: despite an apparent similarity with lithologies of the Aim Fm, Khomentovsky and Karlova (1991) do not consider that it is a part of the Aim Fm./

2. Alternation of dark-grey and brownish planar stromatolitic and oolitic dolostone with greenish-grey and black argillaceous and silty dolostone, siltstone and rare coarse-grained quartzose sandstone of 1.5–2 m thick (45 m).

Ust'-Yudoma Fm

Light-grey fine-grained, in places crystallized and cavernous dolostone /Comment: No details/.

3. Member I (30 m).

4. Member II (60 m).

5. Member III (40 m).

6. Member IV (23 m).

Pestrotsvet Fm

Sunnagin Member

7. Dark-grey and brownish fine-grained dolomitic sandstone with rare glauconite grains (0.7 m). SSF assemblage includes *Torellella lentiformis, T. curvae, Hyolithellus vladimirovae, H. tenuis* (hyolithelminthes), chancelloriids, *Siphogonuchites* (halkieriid), *Turcutheca, Conotheca* (hyoliths), *Bemella jacutica* (mollusc).

8. Yellowish and pinkish platy thin-bedded dolostone (0.8 m).

9. Light-grey dolomitic breccia of small (<1 cm) angular fragments (0.2 m).

10. Yellowish and brownish platy dolostone with interbeds of grey archaeocyath-bearing limestone (1.5 m).

11. Brownish-grey maculate massive limestone with archaeocyath bioherms (1.5 m).

Post-Sunnagin Pestrotsvet Fm

12. Alternation of red argillaceous, white and greenish grey pure dolostone and limy dolostone (apparent thickness 70 m). In the lower 0.5 m SSFs occur: *Torellella biconvexa* (hyolithelminthes), *Tommotia* (tommotiid), *Halkieria sacciformis, Sachites proboscideus* (halkieriid), *Spinulitheca billingsi* (hyolith), *Aldanella crassa, A. sibirica, Bemella jacutica, Oelandiella, Yochelcionella, Barskovia* cf. *hemisymmetrica, Obtusoconus inpocerus, Watsonella crosbyi* (molluscs), *Archaeopetasus excavatus* (problematic).

Khomentovsky, V.V., Val'kov, A.K., and Karlova, G.A., 1990, New data on the biostratigraphy of transitional Vendian-Cambrian strata in the middle Aldan River basin, *in* Khomentovsky, V.V., and Gibsher, A.S., eds., Late Precambrian and Early Palaeozoic of Siberia. Problems of the Regional Stratigraphy: Novosibirsk, Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, p. 3–57 [in Russian].

5) Mt Konus section 8 (p. 18–22, fig. 1):

Ust'-Yudoma Fm

1. White massive dolostone (thickness 25 m).

2. Grey thin- to medium-bedded dolostone with platy argillaceous dolostone at the base and dark-grey thin-bedded dolostone upsection, which contains pinkish dolostone lenses (15 m). Both dark-grey and pinkish dolostones contain small lenses with shelly fossils including *Archaeospira* sp., *Oelandiella* sp., *Purella cristata*, *Barskovia* sp. (molluscs), *Tiksitheca korobovi* (anabaritid), and *Lophotheca socialis* (hyolith?). /Comment: This is, suggestively, the lower middle 'Member III' assemblage, which occurs ca. 60 m below the lower Pestrotsvet Fm boundary (Khomentovsky et al. 1990, p. 21). Same fossils are figured as *Archaeospira* sp., *Latouchella* sp., *Purella* cf. *antiqua*, *Barskovia* sp. (molluscs), *Tiksitheca korobovi* (anabaritid), *Lophotheca socialis* (hyolith?), and *Siphogonuchites* aff. *triangularis* (halkieriids) in Khomentovsky et al. (1990, pls. 1, 3, 4, 6, 8)./

3. Yellowish-grey thin- to medium-bedded, in places, argillaceous and platy dolostone (12 m).

4. Light-grey, thick-bedded and massive sucrose dolostone with silica sinters and sealing wax-red siliceous-hematitic veins (15 m). /These veins, probably, are related to the Mesozoic granitoid intrusion cutting Ediacaran and Cambrian strata./

   At 3 m below the top of the bed, lenses of dark-grey thin-bedded dolostone occur containing shelly fossils: *Purella antiqua, P. arcana* (molluscs), *Halkieria amorphe, H. longus,* and *Siphogonuchites* aff. *triangularis* (halkieriids). /Comment: They are attributed to the upper middle 'Member III', ca. 30 m below the lower Pestrotsvet Fm boundary (Khomentovsky et al. 1990, p. 21). Again, these fossils are figured as *Purella* cf. *cristata* (mollusc), *Halkieria amorphe, H.* cf. *longus, H.* cf. *sacciforma*, *Siphogonuchites* aff. *triangularis* (halkieriids), and *Chancelloria* sp. (chancelloriid) in Khomentovsky et al. (1990, pls. 1, 3, 4, 6, 8)./

5. Yellowish-grey thin-bedded and platy dolostone with a few tubicolous fossils (anabaritid *Cambrotubulus* sp.) at the top (12 m).

6. Light-grey to white fine-grained thick-bedded dolostone (12 m).

Pestrotsvet Fm

7. Sunnagin Member

The contact with the underlaying Ust-Yudoma Fm is sharp, uneven with lenses of glauconitic-dolomitic sandstone at the base overcrowded with small shelly fossils. Besides, the member contains multiple ooids enveloping calcimicrobes and archaeocyath cups as well as mound-like bioherms forming 2–3 m-thick massive. The interbioherm member thickness varies from 1 to 2 m. Archaeocyaths include *Archaeolynthus polaris, Nochoroicyathus sunnaginicus, N. virgatus, N. tkatchenkoi, N. similis, N. anabarensis*, *Cryptoporocyathus junicanensis*, *Cambrocyathellus robustus,* and *Dictyocyathus translucidus*. /Comment: Other fossils are listed on the plot./

The member follows by

8. Brownish thin-bedded argillaceous limy dolostone (25 m).

9. Yellowish-grey bedded limestone (15 m).

10. Brownish argillaceous limestone interbedded with light-grey limestone (18 m).

11. Alternation of brownish, pinkish, yellowish-grey, and light-grey limestones (15 m).

Khomentovsky, V.V. and Karlova, G.A., 1991, New data on the correlation of Vendian-Cambrian strata in the eastern and transitional facies regions of southern Yakutia, *in* Khomentovsky, V.V., ed., Late Precambrian and Early Palaeozoic of Siberia. Siberian Platform and Its Borderland: Novosibirsk, United Institute of Geology, Geophysics and Mineralogy, Siberian Branch, USSR Academy of Sciences, p. 3–44 [in Russian].

6) Nemnekey Creek section 58 (p. 20–27, figs 5, 6):

Aim Fm

1. Yellowish-grey, brownish, and pinkish cross-bedded poorly sorted coarse-grained ferruginous polymictic feldspar-quartzose sandstone with dolomitic cement and common gravelstone (5–7 mm in size grains) interbeds (apparent thickness 23 m).

2. Pinkish planar stromatolitic and ooid dolostone; upsection, thin (0.015 m) interbeds and lenses of quartzose dolostone appear, which are further replaced by lenses and interbeds (0.015–0.15 m) of sandstone followed by thick (3 m) sandstone interbeds and by cross-bedded quartzose dolostone and coarse-grained sandstone (apparent thickness 40 m).

3. Grey ooid dolostone with dark- and greenish-grey platy dolomitic marlstone at the top (ca. 15 m).

4. Alternation of dark-grey dolostone and grey platy well rounded coarse-grained sandstone with dolomitic cement (ca. 5 m).

5. Grey and dark-grey thin- to medium-plated thin- and medium-bedded planar stromatolitic and ooid dolostone, in places brown dolostone with bitumen smell, alternated with platy argillaceous dolostone, marlstone and siltstone (50 m).

   [The topmost strata of bed (5) are further subdivided into:

   1. Dark-grey and brownish-grey fine-grained thin- and medium-plated dolostone with bitumen smell (10 m).

   2. Boudinaged quartzose sandstone (0.03 m).

   3. Dark-grey and brownish-grey fine-grained thin- and medium-plated dolostone with bitumen smell (0.6 m).

   4. Quartzose sandstone with dolomitic cement and uneven base (1 m).

   5. Brownish-grey planar stromatolitic dolostone (0.7 m).

   6. White coarse-grained quartzose sandstone with uneven sharp base and a greenish-grey siltstone bed at the top (1.5 m).

   7. Grey sandy dolostone (1 m).

   8. Brownish-grey bedded dolostone with ooids (11 m).]

/Comment: The total thickness of the Aim Fm is ca. 123 m, but Khomentovsky & Karlova (p. 23) indicate 65–70 m./

Ust'-Yudoma Fm

6. Light-grey to white cross-laminated well sorted quartzose sandstone with dolomitic cement (5 m).

7. Light-grey cavernous crystallised dolostone interbedded with thin-bedded platy argillaceous dolostone comprising members I (28 m), II (30 m), III (37 m), and IV (24 m). Total thickness 119 m.

/Comment: No indications are provided what is the difference between members while this part of the section is poorly exposed./

At the base of Mb II, small shelly fossils occur: *Anabarites trisulcatus, A. valkovi* (anabaritids), *Protohertzina anabarica, P. unguliformis* (protoconodonts) and *Olivooides multicostatus* (embryo?).

Pestrotsvet Fm

The contact is eroded and karstified with karstic cavities filled with silica.

8. Sunnagin Member

Dark and greenish-grey dolomitic sandstone and dolostone enriched with glauconite grains and small shelly fossils, with flat silica and dolostone pebbles at the base (3–4 m).

9. Light-grey massive calcimicrobial (*Renalcis, Tarthinia, Girvanella*) dolomitic limestone with rich SSFs at the base and at the top (20 m). /Comment: This bed is compared with a boulder conglomerate but, certainly, these are so-called kalyptrae – relatively small rounded to irregular equidimensional calcimicrobial bioherms forming a continuous biohermal massif./

10. Light-yellow massive limy dolostone with even richer SSFs (1 m).

11. Yellowish- and brownish-grey thick-bedded platy dolomitic limestone with abundant SSFs (4.5 m).

12. White thin-bedded dolomitised limestone (4 m).

13. Red argillaceous limestone typical of the Pestrotsvet Fm but badly exposed (apparent thickness 85–95 m).

Repina, L.N., Borodaevskaya, Z.V., and Ermak, V.V., 1988, Key section of the Selinde River (southwestern margin of the Aldan Shield), *in* Zhuravleva, I.T., and Repina, L.N., eds., Cambrian of Siberia and Middle Asia: Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, Transactions, v. 720, p. 3–31 [in Russian].

Kouchinsky, A., Bengtson, S., Pavlov, V., Runnegar, B., Val'kov, A., and Young, E., 2005, Pre-Tommotian age of the lower Pestrotsvet Formation in the Selinde section on the Siberian platform: carbon isotopic evidence: Geological Magazine, v. 142, p. 319–325.

7) Selinde River section:

Aim Fm

1. Coarse-grained quartzose sandstone and sandy dolostone at the base. Argillaceous dolostone (apparent thickness ca. 70 m). /Comment: No more details./

Ust'-Yudoma Fm

1. Member I /Comment: These members do not correspond those of Khomentovsky (2008)/. Light grey and yellowish cross-bedded massive quartzose sandy dolostone with glauconite and feldspar grains, in places cavernous (apparent thickness 7.2 m).
2. Yellowish-grey platy and thin-plated hummocky grainy dolostone with glauconite patches (7.5 m).
3. Member II. Yellowish-grey massive and platy grainy dolostone (apparent thickness 1.5 m).
4. Not exposed (9 m).
5. Yellowish-grey massive and platy grainy dolostone (apparent thickness 2 m). *Anabarites trisulcatus* (anabaritid) is determined.

6. Member III. Greenish and pinkish massive grainy and cross-bedded sandy quartzose dolostone (0.5 m).

7. Yellowish-grey massive and cross-bedded slightly sandy dolostone (5.1 m).

8. Yellowish-grey hummocky platy grainy dolostone with glauconite gains and quartzose sand lenses (4.3 m). *Anabarites trisulcatus* (anabaritid) is determined.

9. Member IV. Yellowish-grey massive planar stromatolitic dolostone with branching silica interbeds (apparent thickness 22.2 m).

10. Not exposed (4 m).

11. Yellowish-grey massive grainy cavernous dolostone with glauconite grains (apparent thickness 12 m). *Anabarites trisulcatus* and *Cambrortubulus decurvatus* (anabaritids) are determined.

12. Member V. Yellowish-grey platy striped grainy and cavernous dolostone (apparent thickness 6 m).

13. Not exposed (4.7 m).

14. Light-grey massive grainy cavernous dolostone with limestone interbeds (apparent thickness 12 m). Chancelloriids are detected.

15. Yellowish-grey thick- to thin-bedded cavernous dolostone with glauconite seams (4.4 m). *Anabarites trisulcatus* and *Tiksitheca* (anabaritids) are determined.

16. Yellowish-grey thin-bedded striped dolostone with dolomitic fragments (0.6 m).

17. Greenish-pinkish-grey massive grainy dolostone with glauconite grains and seams (2 m). *Anabarites trisulcatus* and *Cambrortubulus decurvatus* (anabaritids) are determined.

Pestrotsvet Fm

Sunnagin Member

Formations are separated by an erosional surface.

18. Member VI. Brownish thin-bedded and sandy dolostone with thin interbeds of glauconitic sandstone and abundant shelly fossils (2.9 m). SSFs include *Cambrortubulus decurvatus, Tiksitheca licis* (anabaritids), *Hyolithellus vladimirovae*

(hyolithelminth), *Aldanella sibirica, Salanyella costulata, Tannuella gracilis, Oelandiella korobkovi, Purella cristata* (molluscs),), *Turcutheca crasseocochlia, Spinulitheca rotunda* (hyoliths), *Fomitchella* (protoconodont); undetermined archaeocyath fragments (2.7 m above the base of the formation; Khomentovsky & Karlova 2002; Kouchinsky et al. 2005).

Post-Sunnagin Pestrotsvet Fm

19. Member VII. Cherry-red platy thinly-bedded, in places cross-bedded and bioturbated, argillaceous limestone with abundant shelly fossils, especially hyoliths, in some layers (28 m).

    Archaeocyaths *Nochoroicyathus mirabilis*, *Cambrocyathellus tschuranicus* (5 m above the base of the formation/2.1 m above the base of this member; Korshunov et al. 1969; Kouchinsky et al. 2005).

20. Member VIII. Cherry-red platy thinly-bedded, in places bioturbated, argillaceous limestone with white calcimicrobial (*Proaulopora* grainstone) interbeds and abundant shelly fossils (25 m).

Khomentovsky, V.V., and Karlova, G.A., 1989, Vendian-Cambrian strata of the Dzhanda River and their analogies in the key sections of eastern Siberia, *in* Khomentovsky, V.V., and Sovetov, Yu.K., eds., Late Precambrian and Early Palaeozoic of Siberia. Actual Problems of the Stratigraphy: Novosibirsk, Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, p. 23–61 [in Russian].

Khomentovsky, V.V., Val'kov, A.K., and Karlova, G.A., 1990, New data on the biostratigraphy of transitional Vendian-Cambrian strata in the middle Aldan River basin, *in* Khomentovsky, V.V., and Gibsher, A.S., eds., Late Precambrian and Early Palaeozoic of Siberia. Problems of the Regional Stratigraphy: Novosibirsk, Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, p. 3–57 [in Russian].

Khomentovsky, V.V., 2008, The Yudomian of Siberia, Vendian and Ediacaran systems of the International Stratigraphic Scale: Stratigraphy and Geological Correlation, v. 16, p. 581–598.

8) Dzhanda River section (compiled):

Aim Fm

1. Coarse-grained quartzose sandstone and sandy dolostone at the base. Argillaceous dolostone (apparent thickness ca. 70 m).

Ust'-Yudoma Fm

2. Poorly exposed light-grey and dark-grey dolostone, sandy in the basal part, mostly planar stromatolitic and ooid in the middle part, and and grainy and cavernous in the upper part (ca. 150 m). /Comment: Members are not established./ SSFs are found in thin-bedded argillaceous dolostone of 4 m in thickness, which occurs approximately 26 or 34 m below the top of the formation and suggestively are related to the basal Member IV: *Anabarites trisulcatus, A. tricarinatus, Cambrortubulus decurvatus, Tiksitheca licis* (anabaritids), *Palaeosulcachites* (halkieriid), *Purella* (mollusc).

3. Light-grey massive dolostone (apparent thickness 2 m).

4. Light-grey to pinkish aphanitic dolostone with trace fossils up to 1.5 cm in dimeter and topmost (0.02 m) interbed of argillaceous limy dolostone containing glauconite grains and SSFs (apparent thickness 2 m). SSF assemblage: *Tiksitheca licis, Selindeochrea, Cambrortubulus decurvatus* (anabaritids), *Loculitheca beata, Lophotheca socialis* (hyoliths), *Oelandiella korobkovi, Archaeospira regularis, Purella cristata* (molluscs).

Pestrotsvet Fm

Sunnagin Member

Contact slightly eroded.

5. Thin-bedded argillaceous and limy dolostone with multiple lenses of glauconitic-dolomitic sandstone at the base overcrowded with small shelly fossils (0.5-1.5 m). SSFs include *Anabarites tripartitus, A. ternarius, Mariochrea* cf. *sinuosa, Selindeochrea* cf. *tecta, Kotujkanites* cf. *vallatus, Cambrortubulus decurvatus* (anabaritids), *Halkieria sacciformis* (halkieriid), *Lophotheca socialis* (hyolith), *Aldanella sibirica, Anabarella plana, Oelandiella korobkovi, Hamusella rustica, Barskovia* cf. *hemisymmetrica, Salanyella costulata, Archaeospira regularis, Purella cristata, P. antiqua, P. arcana* (molluscs), *Fomitchella* cf. *infundibuliformis* (protoconodont), *Archaeooides selindeicus* (embryo?).

Post-Sunnagin Pestrotsvet Fm

6. Yellowish-grey limy dolostone (0.3 m).

7. Greenish-grey thin-bedded argillaceous limy dolostone with glauconite and shelly lenses (0.7 m). SSFs include *Anabarites tripartitus, A. kelleri, Tiksitheca* (anabaritids), *Hyolithellus* (hyolithelminthes), *Aldanotreta* (brachiopod), *Aldanella, Hamusella, Barskovia hemisymmetrica, Archaeospira regularis, Oelandiella* (molluscs), hyolith opercula.

8. Grey to greenish-yellowish thin- and medium-bedded argillaceous dolomitic limestone (4 m).

9. Not exposed (6 m).

10. White hummocky bioturbated limestone with fine glauconite grains (1.5 m).

11. Brownish argillaceous limestone (15 m).

12. Light-grey aphanitic limestone (3 m).

13. Brownish argillaceous limestone (15 m).

14. Reddish-brown argillaceous limestone with white limestone interbeds at the upper part (apparent thickness 81 m).

Semikhatov, M.A., Komar, V.A., and Serebryakov, S.N., 1970, Yudomian Complex of the Stratotypical Area: Geological Institute, USSR Academy of Sciences, Transactions, v. 210, p. 1–207 [in Russian].

9) Bol'shoy Aim River about Lata River mouth section (p. 66–67, fig. 15):

Aim Fm

At the eroded surface of the dolomitic Mesoproterozoic Tsypanda Fm.

1. Dark-grey and snuff-coloured foliose calcareous siltstone with interbeds of brownish-grey grainy dolostone and coarse- and fine-grained quartzose sandstone (20–24 m).

2. Dark-grey and snuff-coloured foliose calcareous siltstone with interbeds of brownish-grey platy grainy argillaceous dolostone (23 m).

3. Grey massive sandy dolostone with interbeds of bituminous dolostone and, in the upper part, with interbeds of greenish and snuff-coloured siltstone (15 m).

4. Greenish-grey and reddish-brown calcareous siltstone (13–17 m).

5. Dark-grey and grey massive grainy weakly bituminous dolostone (7 m).

6. Light-grey and grey massive fine- and medium-grained quartzose sandstone with dolomitic cement, passing upsection into dolomitic sandstone and sandy dolostone (20–22 m).

7. Light-grey massive ooid and stromatolitic box-like (in the upper part) dolostone (23 m).

Ust'-Yudoma Fm

8. Yellowish-grey cross-laminated fine- and medium -grained quartzose sandstone with glauconite grains, passing upsection into cross-laminated sandy dolostone (19–20 m).

9. Light-grey and grey massive, in places cross-laminated, grainy dolostone (100–120 m).

SSFs of the *Purella crista* Zone are indicated by Khomentovsky (2008) approximately 15–20 m below the top of the Ust'-Yudoma Fm, but without any presice determination.

Pestrotsvet Fm

The contact is not observed.

11. Variegated glauconitic limestone.

Semikhatov, M.A., Komar, V.A., and Serebryakov, S.N., 1970, Yudomian Complex of the Stratotypical Area: Geological Institute, USSR Academy of Sciences, Transactions, v. 210, p. 1–207 [in Russian].

Yakshin, M.S., and Pereverzev, L.R., 1990, The Yudoma Group in the upper Maya River basin, *in* Khomentovsky, V.V., and Gibsher, A.S., eds., Late Precambrian and Early

Palaeozoic of Siberia. Problems of the Regional Stratigraphy: Novosibirsk, Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, p. 58–63 [in Russian].

10) upper Maya River section about Nizhniy Inikanchan River (fig. 2):

Aim Fm

At the eroded surface of the pre-Ediacaran siliciclastic Uy Group.

1. White and yellowish-grey massive thick-plated, commonly cross-laminated, fine-, medium and coarse-grained quartzose sandstone with gravelstone at the base (apparent thickness 40 m).

2. Grey feldspar-quartzose sandstone and dark wavy-laminated platy siltstone with thin grey dolostone interbeds (30–35 m).

3. Frequent alternation of grey and greenish-grey polymictic fine-grained sandstone, siltstone and claystone; interbeds of 0.1–0.2 m thick (150–160 m). Acritarchs are present.

4. Interbedding of red and reddish-brown sandstone, siltstone, claystone, limestone, and limy marlstone (apparent thickness 80–85 m). /A tectonic displacement does not allow a precise measure of the unit thickness./

5. Alternation of grey massive dolostone, planar stromatolitic dolostone and quartzose sandstone; interbeds are up to 1 m thick (75–85 m).

Ust'-Yudoma Fm

Contact sharp.

6. Light-grey fine- to medium-grained quartzose sandstone (50 m).

7. Greenish- and pinkish-grey platy to massive finely crystallized slightly silicified dolostone with interbeds of dolomitic siltstone and quartz lenses (280–300 m).

8. Greenish- and blueish-grey massive limestone (mudstone) with small (<1 cm) rounded quartz nodules (40–60 m).

Inikanchan Fm

The contact is tectonic.

12. Red siltstone, claystone, sandstone and more rare limestone (apparent thickness over 1500 m). /Comment: Atdabanian trilobites and archaeocyaths are noted in the middle part./

Supplementary references (for data and information presented in figures S1 to S7)

Astashkin, V.A., Pegel', T.V., Repina, L.N., Rozanov, A.Yu., Shabanov, Yu.Ya., Zhuravlev, A.Yu., Sukhov, S.S., and Sundukov, V.M., 1991, The Cambrian System on the Siberian Platform. Correlation chart and explanatory notes: International Union of Geological Sciences Publication, no. 27, p. 1–133.

Bartley, J.K., Pope, M., Knoll, A.H., Semikhatov, M.A., and Petrov, P.Yu., 1998, A Vendian-Cambrian boundary succession from the northwestern margin of the Siberian Platform: stratigraphy, palaeontology, chemostratigraphy and correlation: Geological Magazine, v. 135, p. 473–494.

Brasier, M.D., Khomentovsky, V. V., and Corfield, R.M., 1993, Stable isotopic calibration of the earliest skeletal fossil assemblages in eastern Siberia (Precambrian-Cambrian boundary): Terra Nova, v. 5, p. 225–232.

Brasier, M.D., Rozanov, A.Y., Zhuravlev, A.Y., Corfield, R.M., and Derry, L.A., 1994b, A carbon isotope reference scale for the Lower Cambrian Series in Siberia (Report of IGCP Project 303): Geological Magazine, v. 131, p. 767–783.

Chumakov, N.M., Semikhatov, M.A., and Sergeev, V.N., 2013, Vendian reference section of southern Middle Siberia: Stratigraphy and Geological Correlation, v. 21, p. 359–382.

Cui, H., Grazhdankin, D.V., Xiao, S., Peek, S., Rogov, V.I., Bykova, N.V., Sievers, N.E., Liu, X.M., and Kaufman, A.J., 2016, Redox-dependent distribution of early macro-organisms: Evidence from the terminal Ediacaran Khatyspyt Formation in Arctic Siberia: Palaeogeography, Palaeoclimatology, Palaeoecology, v. 461, p. 122–139.

Datsenko, V.A., Zhuravleva, I.T., Lazarenko, N.P., Popov, Yu.N., and Chernysheva, N.E., 1968, Biostratigraphy and fauna of the Cambrian deposits of the northwestern Siberian Platform: Nauchno-Issledovatel'skiy Institut Geologii Arktiki, Trudy, v. 155, p. 1–213 [in Russian].

Golubkova,E.Yu., 2019, Organic-walled microfossils in the Vendian stratigraphy of the Southeast of the Siberian Platform [Ph.D. thesis]: Saint Petersburg, Institute of Geology and Geochronology of Precambrian, Russian Academy of Sciences, 207 p. [in Russian].

Ivantsov, A.Y., 2017, Finds of Ediacaran-type fossils in Vendian deposits of the Yudoma Group, Eastern Siberia: Doklady Earth Sciences, v. 472, p. 143–146.

Karlova, G.A., 1987, First finds of a skeletal fauna in the Turkut Formation of the Olenek Uplift: Doklady Akademii Nauk SSSR, v. 292, p. 204–205 [in Russian].

Karlova, G.A., and Vodanyuk, S.A., 1985, New data on transitional Cambrian strata in the r. Khorbusuonka basin (Olenek Uplift), *in* Khomentovsky, V.V., ed., Stratigraphy of the Late Precambrian and Early Palaeozoic of Siberia, Vendian and Riphean: Novosibirsk, Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 3–13 [in Russian].

Kaufman, A.J., Knoll, A.H., Semikhatov, M.A., Grotzinger, J.P., Jacobsen, J.P., and Adams, W., 1996, Integrated chronostratigraphy of Proterozoic-Cambrian beds in the western Anabar region, northern Siberia: Geological Magazine, v. 133, p. 509–533.

Khabarov, E.M., and Izokh, O.P., 2014, Sedimentology and isotope geochemistry of Riphean carbonates in the Kharaulakh Range of northern East Siberia: Russian Geology and Geophysics, v. 55, p. 629–648.

Khabarov, E.M., and Ponomarchuk, V.A., 2005, Carbon isotopes in the upper Riphean deposits of the Baikal Group in western Cisbaikalia: stratigraphic implications: Russian Geology and Geophysics, v. 46, p. 1019–1037.

Khomentovsky, V.V., 1985, The Vendian of the Siberian Platform, *in* Sokolov, B.S., and Fedonkin, M.A., eds., Vendskaya sistema, Istoriko-geologicheskoe i paleontologicheskoe obosnovanie, t. 2, Stratigrafiya i geologicheskie protsesy: Moscow, Nauka (translated in The Vendian System, v. 2, Regional Geology: Berlin; Heidelberg, Springer, 1990), p. 83–161.

Khomentovsky, V. V., 2008, The Yudomian of Siberia, Vendian and Ediacaran systems of the international stratigraphic scale: Stratigraphy and Geological Correlation, v. 16, p. 581–598.

Khomentovsky, V.V., and Karlova, G.A., 1986, On the lower boundary of the Pestrotsvet Formation in the r. Aldan basin, *in* Khomentovsky, V.V. ed., Late Precambrian and Early Palaeozoic of Siberia, Siberian Platform and the Outer Belt of the Altay-Sayan Foldbelt: Novosibirsk, Insitut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 3–22 [in Russian].

Khomentovsky, V.V., and Karlova, G.A., 1989, Vendian-Cambrian strata of the Dzhanda River and their analogies in the key sections of eastern Siberia, *in* Khomentovsky, V.V. and Sovetov, Y.K. eds., Late Precambrian and Early Palaeozoic of Siberia. Actual Problems of the Stratigraphy: Novosibirsk, Insitut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 23–61 [in Russian].

Khomentovsky, V.V., and Karlova, G.A., 1991, New data on the correlation of Vendian-Cambrian strata in the eastern and trasitional facies regions of southern Yakutia, *in* Khomentovsky, V.V. ed., Late Precambrian and Early Palaeozoic of Siberia. Siberian Platform and its Borderlands: Novosibirsk, Ob'edinennyy Insitut Geologii, Geofiziki i Mineralogii, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 3–44 [in Russian].

Khomentovsky, V. V., and Karlova, G.A., 1993, Biostratigraphy of the Vendian-Cambrian beds and the lower Cambrian boundary in Siberia: Geological Magazine, v. 130, p. 29–45.

Khomentovsky, V. V., and Karlova, G.A., 2002, The boundary between Nemakit-Daldynian and Tommotian stages (Vendian-Cambrian Systems) of Siberia: Stratigraphy and Geological Correlation, v. 10, p. 217–238.

Khomentovsky, V.V., Val'kov, A.K., Karlova, G.A., and Nuzhnov, S.V., 1983, Key section of transitional Precambrian-Cambrian strata in the lower Gonam River, *in* Khomentovsky, V.V. ed., Late Precambrian and Early Palaeozoic of Siberia. Vendian Strata: Novosibirsk, Insitut Geologii i

Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 24–36 [in Russian].

Khomentovsky, V.V., Val'kov, A.K., and Karlova, G.A., 1990, New data on the biostratigraphy of transitional Vendian-Cambrian strata in the middle Adan River basin, *in* Khomentovsky, V.V. and Gibsher, A.S. eds., Late Precambrian and Early Palaeozoic of Siberia. Problems of the Regional Stratigraphy: Novosibirsk, Insitut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 3–57 [in Russian].

Khomentovsky, V. V., Postnikov, A.A., Karlova, G.A., Kochnev, B.B., Yakshin, M.S., and Ponomarchuk, V.A., 2004, The Vendian of the Baikal-Patom Upland, Siberia: Geologiya i Geofizika, v. 45, p. 465–484.

Kirschvink, J.L., and Rozanov, A.Yu., 1984, Magnetostratigraphy of lower Cambrian strata from the Siberian Platform: a palaeomagnetic pole and a preliminary polarity time-scale: Geological Magazine, v. 121, p. 189–203.

Kirschvink, J.L., Magaritz, M., Ripperdan, R.L., Zhuravlev, A.Yu., and Rozanov, A.Yu., 1991, The Precambrian/Cambrian Boundary: Magnetostratigraphy and Carbon Isotopes Resolve Correlation Problems Between Siberia, Morocco, and South China: GSA Today, v. 1, p. 69–71, 87, 91.

Knoll, A.H., Grotzinger, J.P., Kaufman, A.J., and Kolosov, P.N., 1995, Integrated approaches to terminal Proterozoic stratigraphy: An example from the Olenek Uplift, northeastern Siberia: Precambrian Research, v. 73, p. 251–270.

Kochnev, B.B., Pokrovsky, B.G., Kuznetsov, A.B., and Marusin, V.V., 2018, C and Sr isotope chemostratigraphy of Vendian-Lower Cambrian carbonate sequences in the central Siberian Platform: Russian Geology and Geophysics, v. 59, p. 585–605.

Korshunov, V.I., Repina, L.N., and Sysoev, V.A., 1969, To the structure of the Pestrotsvet Formation on the East of the Aldan Anteclise: Geologiya i Geofizika, v. 1969(10), p. 18–21 [in Russian].

Kouchinsky, A., Bengtson, S., Missarzhevsky, V.V., Pelechaty, S., Torssander, P., and Val'kov, A.K., 2001, Carbon isotope stratigraphy and the problem of a pre-Tommotian Stage in Siberia: Geological Magazine, v. 138, p. 387–396.

Kouchinsky, A., Bengtson, S., Pavlov, V., Runnegar, B., Val'kov, A., and Young, E., 2005, Pre-Tommotian age of the lower Pestrotsvet Formation in the Selinde section on the Siberian platform: carbon isotopic evidence: Geological Magazine, v. 142, p. 319–325.

Kouchinsky, A., Bengtson, S., Pavlov, V., Runnegar, B., Torssander, P., Young, E., and Ziegler, K., 2007, Carbon isotope stratigraphy of the Precambrian-Cambrian Sukharikha River section, northwestern Siberian platform: Geological Magazine, v. 114, p. 1–10.

Kouchinsky, A., Bengtson, S., Landing, E., Steiner, M., Vendrasco, M., and Ziegler, K., 2017, Terreneuvian stratigraphy and faunas from the Anabar Uplift, Siberia: Acta Palaeontologica Polonica, v. 62, p. 311–440.

Kouchinsky, A. et al., 2022, Early–middle Cambrian stratigraphy and faunas from northern Siberia: Acta Palaeontologica Polonica, v. 67, p. 341–464.

Kuznetsov, A.B., Ovchinnikova, G.V., Gorokhov, I.M., Letnikova, E.F., Kaurova, O.K., and Konstantinova, G.V., 2013, Age constraints on the Neoproterozoic Baikal Group from combined Sr isotopes and Pb-Pb dating of carbonates from the Baikal type section, southeastern Siberia: Journal of Asian Earth Sciences, v. 62, p. 51–66.

Landing, E., and Kouchinsky, A., 2016, Correlation of the Cambrian Evolutionary Radiation: geochronology, evolutionary stasis of earliest Cambrian (Terreneuvian) small shelly fossil (SSF) taxa, and chronostratigraphic significance: Geological Magazine, v. 153, p. 750–756.

Luchinina, V.A., Korovnikov, I.V., Sipin, D.P., and Fedoseev , A.V., 1997, Upper Vendian–Lower Cambrian biostratigraphy of the Sukharikha River section (Siberian Platform): Russian Geology and Geophysics, v. 38, p. 1385–1397.

Magaritz, M., 1989, ^{13}C minima follow extinction events: A clue to faunal radiation: Geology, v. 17, p. 337–340.

Magaritz, M., Holser, W.T., and Kirschvink, J.L., 1986, Carbon-isotope events across the Precambrian/Cambrian boundary on the Siberian Platform: Nature, v. 320, p. 258–259.

Magaritz, M., Kirschvink, J.L., Latham, A.J., Zhuravlev, A.Yu., and Rozanov, A.Yu., 1991, Precambrian/Cambrian boundary problem: Carbon isotope correlations for Vendian and Tommotian time between Siberia and Morocco: Geology, v. 19, p. 847–850.

Marusin, V.V., Kochnev, B.B., Karlova, G.A., and Nagovitsin, K.E., 2019, Resolving Terreneuvian stratigraphy in subtidal–intertidal carbonates: palaeontological and chemostratigraphical evidence from the Turukhansk Uplift, Siberian Platform: Lethaia, v. 52, p. 464–485.

Marusin, V.V. et al., 2021, Detrital zircon age and biostratigraphic and chemostratigraphic constraints on the Ediacaran-Cambrian transitional interval in the Irkutsk Cis-Sayans Uplift, southwestern Siberian Platform: Geological Magazine, v. 158, p. 1156–1172.

Mel'nikov, N.V. et al., 2005, Stratigraphy of the Oil-Gas-Bearing Basins of Siberia. Riphean and Vendian of the Siberian Platform and Its Folded Border: Novosibirsk, Academic Publishing House <Geo>, 428 p.

Meshkova, N.P., 1974, Lower Cambrian hyoliths of the Siberian Platform: Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, Trudy, v. 97, p. 1–111 [in Russian].

Nagovitsin, K.E., Rogov, V.I., Marusin, V. V., Karlova, G.A., Kolesnikov, A. V., Bykova, N. V., and Grazhdankin, D. V., 2015, Revised Neoproterozoic and Terreneuvian stratigraphy of the Lena-Anabar Basin and north-western slope of the Olenek Uplift, Siberian Platform: Precambrian Research, v. 270, p. 226–245.

Parkhaev, P.Yu., Skorlotova, N.A., and Shuvalova, Yu.V., 2016, New carbon isotope data on the Precambrian-Cambrian interval of the Tommotian stage hypostratotype- Isit' Section (Lena

River, Siberian Platform): AGI Phanerozoic Earth History, Stratigraphy and the Geologic Time Scale T47.15 – Early Paleozoic World. Conference Paper, no. 4100.

Pelechaty, S.M., 1998, Integrated chronostratigraphy of the Vendian System of Siberia: implications for a global stratigraphy: Journal of the Geological Society, London, v. 155, p. 957–973.

Pelechaty, S.M., Grotzinger, J.P., Kashirtsev, V.A., and Zhernovsky, V.P., 1996a, Chemostratigraphic and sequence stratigraphic constraints on Vendian-Cambrian basin dynamics, Northeast Siberian Craton: The Journal of Geology, v. 104, p. 543–563.

Pelechaty, S.M., Kaufman, A.J., and Grotzinger, J.P., 1996b, Evaluation of δ13C chemostratigraphy for intrabasinal correlation: Vendian strata of northeast Siberia: Geological Society of America Bulletin, v. 108, p. 992–1003.

Pokrovsky, B.G., Melezhik, V.A., and Bujakaite, M.I., 2006, Carbon, oxygen, strontium, and sulfur isotopic compositions in Late Precambrian rocks of the Patom Complex, Central Siberia: Communication 1. Results, isotope stratigraphy, and dating problems: Lithology and Mineral Resources, v. 41, p. 450–474.

Pokrovsky, B.G., Bujakaite, M.I., and Kokin, O.V., 2012, Geochemistry of C, O, and Sr isotopes and chemostratigraphy of Neoproterozoic rocks in the northern Yenisei Ridge: Lithology and Mineral Resources, v. 47, p. 177–199.

Pokrovsky, B.G., Bujakaite, M.I., Petrov, O.L., and Kolesnikova, A.A., 2020, The C, O, and Sr isotope chemostratigraphy of the Vendian (Ediacaran)–Cambrian transition, Olekma River, western slope of the Aldan Shield: Stratigraphy and Geological Correlation, v. 28, p. 479–492.

Pyatiletov, V.G., 1988, Late Precambrian microfossils of the Uchur-Maya Region, *in* Khomentovsky, V.V. and Shenfil', V.Y. eds., Late Precambrian and Early Palaeozoic of Siberia, Riphean and Vendian: Novosibirsk, Insitut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 47–104.

Repina, L.N., Borodaevskaya, Z.V., and Ermak, V.V., 1988, Key section of the r. Selinde (south-eastern margin of the Aldan Shield), *in* Zhuravleva, I.T., and Repina, L.N., eds., Cambrian of Siberia and Middle Asia: Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, Trudy, v. 720, p. 3–31 [in Russian].

Rogov, V.I., Karlova, G.A., Marusin, V. V., Kochnev, B.B., Nagovitsin, K.E., and Grazhdankin, D. V., 2015, Duration of the first biozone in the Siberian hypostratotype of the Vendian: Russian Geology and Geophysics, v. 56, p. 573–583.

Rowland, S.M., Luchinina, V.A., Korovnikov, I.V., Sipin, D.P., Tarletskov, A., and Fedoseev, A.V., 1998, Biostratigraphy of the Vendian-Cambrian Sukharikha River section, northwestern Siberian Platform: Canadian Journal of Earth Sciences, v. 35, p. 339–352.

Rozanov, A.Yu., and Sokolov, B.S., eds., 1984, Early Cambrian Stage Subdivision, Stratigraphy: Moscow, Nauka, 184 p. [in Russian].

Rozanov, A.Yu., and Varlamov, A.I., eds., 2008, The Cambrian System of the Siberian Platform. XIII International Field Conference of the Cambrian Stage Subdivision Working Group, Yakutia, Russia, July 20 - August 1, 2008, Field Guide parts 1 and 2.

Rozanov, A.Yu., Missarzhevsky, V.V., Volkova, N.A., Voronova , L.C., Krylov, I.N., Keller, B.M., Korolyuk, I.K., Lendzion, K., Michniak, R., Pykhova, N.G., and Sidorov, A.D., 1969, The Tommotian Stage and the Cambrian lower boundary problem: New Delhi, Amerind Publishing Co. (for 1981), 359 p.

Rozanov, A.Yu., Khomentovsky, V.V., Shabanov, Y.Y., Karlova, G.A., Varlamov, A.I., Luchinina, V.A., Pegel', T.V., Demidenko, Y.E., Parkhaev, P.Y., Korovnikov, I.V., and Skorlotova, N.A., 2008, To the problem of stage subdivision of the Lower Cambrian: Stratigraphy and Geological Correlation, v. 16, p. 1–19.

Rud'ko, S.V., Petrov, P.Yu., Kuznetsov, A.B., Shatsillo, A.V., and Petrov, O.L., 2017, Refined $\delta^{13}C$ trend of the Dal'nyaya Taiga Series of the Ura Uplift (Vendian, southern part of Middle Siberia): Doklady Earth Sciences, v. 477, p. 1449-1453.

Rud'ko, S.V., Kuznetsov, A.B., and Petrov, P.Yu., 2020, Strontium isotope composition in limestones of the Dal'nyaya Taiga Group in the Patom Basin: Vendian reference section of Siberia: Lithology and Mineral Resources, v. 55, p. 206–217.

Rud'ko, S.V., Kuznetsov, A.B., Petrov, P.Yu., Sitkina, D.R., and Kaurova, O.K., 2021, Pb-Pb dating of the Dal'nyaya Taiga Group in the Ura uplift of southern Siberia: Implications for correlation of C-isotopic and biotic events in the Ediacaran: Precambrian Research, v. 362, p. 106285.

Sarsembaev, Z.A., and Marusin, V.V., 2019, Big guns of the Cambrian Explosion: macroskeletal benthic assemblage in the lower Cambrian Stage 2 of the Olenek Uplift, Arctic Siberia: Estudios Geológicos, v. 75, p. e113.

Savitsky, V.E., Zhuravleva, I.T., Kir'yanov, V.V., Luchinina, V.A., Meshkova, N.P., and Shishkin, B.B., 1980, Nemakit-Daldynian facies stratotype of the Precambrian and Cambrian boundary in Siberia, *in* Sidorenko, A.V., ed., International Geological Congress, XXVI Session, Reports of Soviet Geologists, Precambrian: Moscow, Nauka, p. 164–170.

Semikhatov, M.A., Komar, V.A., and Serebryakov, S.N., 1970, Yudomian Complex of the Stratotypical Area: Geologicheskiy Institut, Academiya Nauk SSSR, Trudy, v. 210, 1–207.

Semikhatov, M.A., Obchinnikova, G. V., Gorokhov, I.M., Kuznetsov, A.B., Kaurova, O.K., and Petrov, P.Y., 2003, Pb-Pb Isochron Age and Sr-Isotopic Signature of the Upper Yudoma Carbonate Sediments (Vendian of the Yudoma-Maya Trough, Eastern Siberia): Doklady Earth Sciences, v. 393, p. 1093–1097.

Shabanov, Y.Y., Korovnikov, I.V., Pereladov, V.S., Pak, K.L., and Fefelov, A.F., 2008, Kuonamka Formation on Molodo River – a candidate for global stratotype of the lower boundary of the

Middle Cambrian (East of the Siberian Platform), Cambrian sections of the Siberian Platform – candidates for stratotypes of subdivisions of the International Stratigraphical scheme (Stratigraphy and Palaeontology), Materials for 13th International Field Conference of the Cambrian Stage Subdivision Working Group: Novosibirsk, SB RAN, p. 59–70.

Shemin, G.G., Terleev, A.A., Postnikov, A.A., Tokarev, D.A., and Kochnev, B.B., 2011, Structure features of the Vendian – Lower Cambrian section on the Siberian Platform, intersected by Chaikinskaya 279 parametrical borehole: Geologiya i Mineral'no-Syr'evye Resursy Sibiri, v. 4(8), p. 21–29 [in Russian].

Sochava, A.V., Podkovyrov, V.N., and Vinogradov, D.P., 1996, Variations of carbon and oxygen isotope compositions in Vendian-Lower Cambrian carbonate rocks of the Ura Anticlinorium (southern Siberian platform): Lithology and Mineral Resources, v. 31, p.248–257.

Sysoev, V.A., 1972, Lower Cambrian Biostratigraphy and Orthothecimorph Hyoliths of the Siberian Platform: Moscow, Nauka, 152 p. [in Russian].

Val'kov, A.K., 1975, Cambrian Biostratigraphy and Hyoliths of the North-East of the Siberian Platform: Moscow, Nauka, 140 p. [in Russian].

Val'kov, A.K., 1982, Lower Cambrian Biostratigraphy of the East of the Siberian Platform: Moscow, Nauka, 92 p. [in Russian].

Val'kov, A.K., 1983, Distribution of the oldest skeletal organisms and the correlation of the Cambrian lower boundary in the south-eastern part of the Siberian Platform, *in* Khomentovsky, V.V. ed., Late Precambrian and Early Palaeozoic of Siberia, Vendian Strata: Novosibirsk, Insitut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 37–48 [in Russian].

Val'kov, A.K., and Karlova, G.A., 1984, Fauna from transitional Vendian-Cambrian strata in the lower Gonam River, *in* Khomentovsky, V.V. ed., Stratigraphy of the Late Precambrian and Early

Palaeozoic. Middle Siberia: Novosibirsk, Insitut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 12–41 [in Russian].

Varlamov, A.I. et al., 2008, The Cambrian System of the Siberian Platform. Part 1: The Aldan-Lena Region: Moscow, PIN RAS, 300 p.

Vinogradov, V.I., Belenitskaya, G.A., Bujakaite, M.I., Kuleshov, V.N., Minaeva, M.A., and Pokrovskii, B.G., 2006a, Isotopic signatures of deposition and transformation of Lower Cambrian saliferous rocks in the Irkutsk Amphitheater: Communication 1. Sulfur isotopic composition: Lithology and Mineral Resources, v. 41, p. 85–97.

Vinogradov, V.I., Belenitskaya, G.A., Bujakaite, M.I., Kuleshov, V.N., Minaeva, M.A., and Pokrovskii, B.G., 2006b, Isotopic signatures of deposition and transformation of Lower Cambrian saliferous rocks in the Irkutsk Amphitheater: Communication 3. Carbon and oxygen isotopic compositions in carbonates: Lithology and Mineral Resources, v. 41, p. 271–279.

Vishnevskaya, I.A., Letnikova, E.F., Vetrova, N.I., Kochnev, B.B., and Dil, S.I., 2017, Chemostratigraphy and detrital zircon geochronology of the Neoproterozoic Khorbusuonka Group, Olenek Uplift, Northeastern Siberian platform: Gondwana Research, v. 51, p. 255–271.

Vologdin, A.G., and Maslov, A.B., 1960, On a new group of fossil organisms from the lower Yudoma Formation of the Siberian Platform: Doklady Akademii Nauk SSSR, v. 134, p. 691–693 [in Russian].

Voronova, L.G., Grigor'eva, N.V., Zhegallo, E.A., Missarzhevsky, V.V., and Sysoev, V.A., 1983, Age of the "*Oelandiella*" *korobkovi–Anabarella plana* strata on the Siberian Platform: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, v. 1983(12), p. 80–84 [in Russian].

Wood, R.A., Zhuravlev, A.Y., Sukhov, S.S., Zhu, M., and Zhao, F., 2017, Demise of Ediacaran dolomitic seas marks widespread biomineralization on the Siberian Platform: Geology, v. 45, p. 27–30.

Yakshin, M.S., and Pereverzev, L.R., 1990, The Yudoma Group in the upper Maya River basin, *in* Khomentovsky, V.V., and Gibsher, A.S., eds., Late Precambrian and Early Palaeozoic of Siberia. Problems of the Regional Stratigraphy: Novosibirsk, Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, p. 58–63 [in Russian].

Zhu, M., Zhuravlev, A.Y., Wood, R.A., Zhao, F., and Sukhov, S.S., 2017, A deep root for the Cambrian explosion: Implications of new bio- and chemostratigraphy from the Siberian Platform: Geology, v. 45, p. 459–462.

Zhuravlev, A.Y., Gámez Vintaned, J.A., and Ivantsov, A.Y., 2009, First finds of problematic Ediacaran fossil *Gaojiashania* in Siberia and its origin: Geological Magazine, v. 146, p. 775–780.

Figs S1–S7 [Stratigraphic correlation charts for the Siberian Platform]

Figure S1. Page 1 of separate pdf (Bowyeretal_SI_FiguresS1–S7.pdf). Map of Siberian Platform showing major pre-Cambrian to Cambrian Series 2 study regions after Astashkin et al. (1991), Sovetov (2002) and Khomentovsky (2008). Breakdown of sections with references to geochemical and sedimentological studies.

Figure S2. Page 2 of separate pdf (Bowyeretal_SI_FiguresS1–S7.pdf). Stratigraphic columns and associated C and O isotope chemostratigraphy of sections of the Yenisei Range, the Irkutsk Amphitheatre and the Baikal and Patom highlands.

Figure S3. Page 3 of separate pdf (Bowyeretal_SI_FiguresS1–S7.pdf). Stratigraphic columns and associated C and O isotope chemostratigraphy of boreholes of the Syugdzhera Saddle, Nepa-Botuoba Uplift to southern slope of Anabar Shield.

Figure S4. Page 4 of separate pdf (Bowyeretal_SI_FiguresS1–S7.pdf). Stratigraphic columns and associated C and O isotope chemostratigraphy of sections of the Turukhansk Uplift, Igarka-Norilsk Uplift and the Anabar Shield.

Figure S5. Page 5 of separate pdf (Bowyeretal_SI_FiguresS1–S7.pdf). Stratigraphic columns and associated C and O isotope chemostratigraphy of sections of the Olenek Uplift and the Khara-Ulakh Mountains.

Figure S6. Page 6 of separate pdf (Bowyeretal_SI_FiguresS1–S7.pdf). Stratigraphic columns and associated C and O isotope chemostratigraphy of sections of the Lena River, including the lower reaches in the vicinity of the Bulkur anticline, Khara-Ulakh Mountains.

Figure S7. Page 7 of separate pdf (Bowyeretal_SI_FiguresS1–S7.pdf). Stratigraphic columns and associated C and O isotope chemostratigraphy of sections of the Uchur-Maya Plate and Yudoma-Maya Belt.

Table S1

Sample ID	Collection height (m)	*Scaled height (m)	lithology	Formation	$\delta^{13}C$ (‰)	$\delta^{18}O$ (‰)
Samples collected by Maoyan Zhu and Fangchen Zhao. Samples analysed at the State Key Laboratory of Palaeobiology and Stratigraphy, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences. *Sample heights for NV scaled to AZ+RW sample set through direct correlation between $\delta^{13}C$ datasets and positions relative to marker horizons (e.g. Aim/Ust'-Yudoma Fm contact).						
Yudoma-Maya confluence (YM, 59°9'16.20"N, 135°13'37.50"E)						
YI-1	-1.00		Dolomite	Aim	2.32	-7.35
YI-05	-0.50		Dolomite	Aim	2.41	-7.11
YI0	0.00		Dolomite	Aim	2.37	-6.29
YI0	0.00		Dolomite	Aim	2.65	-7.78
YI0.6	0.60		Dolomite	Aim	2.52	-8.53
YI1.5	1.50		Dolomite	Aim	2.73	-7.53
YI2.1	2.10		Dolomite	Aim	2.75	-7.59
YI2.7	2.70		Dolomite	Aim	2.39	-7.58
YI3.1	3.10		Dolomite	Aim	2.49	-7.51
YI3.8	3.80		Dolomite	Aim	2.38	-6.53
YI4.2	4.20		Dolomite	Aim	2.23	-2.38
YI4.5	4.50		Dolomite	Aim	1.79	-8.18
YI4.8	4.80		Dolomite	Aim	2.48	-6.99
YI5	5.00		Dolomite	Aim	2.28	-3.81
YI5.5	5.50		Dolomite	Aim	2.45	-6.33
YI6	6.00		Dolomite	Aim	2.37	-6.55
YI6.6	6.60		Dolomite	Aim	2.68	-4.82
YI7.2	7.20		Dolomite	Aim	2.18	-6.49
YI7.7	7.70		Dolomite	Aim	2.06	-3.67
YI8.3	8.30		Dolomite	Aim	2.11	-4.54
YI8.8	8.80		Dolomite	Aim	1.90	-6.06
YI9.3	9.30		Dolomite	Aim	1.99	-4.75
YI9.8	9.80		Dolomite	Aim	1.31	-6.17
YI10.2	10.20		Dolomite	Aim	1.12	-2.82
YI10.5	10.50		Dolomite	Aim	0.73	-2.03
YI10.6	10.60		Dolomite	Aim	0.63	-4.35

YI11.4	11.40		Dolomite	Aim	0.10	-0.22
YI11.9	11.90		Dolomite	Aim	0.19	-3.55
YI12.4	12.40		Dolomite	Aim	0.64	-3.27
YI12.9	12.90		Dolomite	Aim	0.07	0.55
YI13.2	13.20		Dolomite	Aim	0.51	-2.80
YI14.2	14.20		Dolomite	Aim	0.45	-2.16
YI15.2	15.20		Dolomite	Aim	0.10	0.33
YI16.2	16.20		Dolomite	Aim	0.23	-1.08
YI17.2	17.20		Dolomite	Aim	-0.04	-2.34
YI18.2	18.20		Dolomite	Aim	-0.62	-1.23
YI19.2	19.20		Dolomite	Aim	-0.47	-1.49
YI20.2	20.20		Dolomite	Aim	-0.87	-0.90
YI21	21.00		Dolomite	Aim	-0.73	-2.31
YI22	22.00		Dolomite	Aim	-0.69	-2.91
YI23	23.00		Dolomite	Aim	-0.65	-2.44
YI24	24.00		Dolomite	Aim	-0.63	-3.08
YI24.8	24.80		Dolomite	Aim	-0.36	-1.63
YI25	25.00		Dolomite	Aim	-0.84	-1.65
YI30	30.00		Dolomite	Ust'-Yudoma?	-0.65	0.60
YI35	35.00		Dolomite	Ust'-Yudoma?	-0.34	-1.60
Nuuchchalakh Valley (NV, 59°25'8.94"N, 136°15'9.78"E)						
NI0	0.00	27.60	Dolomite	Aim	0.23	-1.28
NI0.5	0.50	28.05	Dolomite	Aim	0.44	-1.45
NI1	1.00	28.50	Dolomite	Aim	0.75	-4.11
NI1.5	1.50	28.94	Dolomite	Aim	0.13	-2.73
NI2	2.00	29.39	Dolomite	Aim	0.30	-2.18
NI2.5	2.50	29.84	Dolomite	Aim	0.71	-2.01
NI3	3.00	30.29	Dolomite	Aim	0.61	-2.18
NI4	4.00	31.18	Dolomite	Aim	0.53	-1.99
NI4.5	4.50	31.63	Dolomite	Aim	0.55	-1.90
NI5	5.00	32.08	Dolomite	Aim	0.42	-0.94
NI6	6.00	32.98	Dolomite	Aim	0.04	-2.03
NI7	7.00	33.87	Dolomite	Aim	-0.06	-1.63
NI7.5	7.50	34.32	Dolomite	Aim	-0.03	-2.23
NI8	8.00	34.77	Dolomite	Aim	0.02	-1.93

NI9	9.00	35.66	Dolomite	Aim	-0.08	-2.74
NI10	10.00	36.56	Dolomite	Aim	-0.12	-1.81
NI11	11.00	37.46	Dolomite	Aim	-0.26	-1.93
NI11.9	11.90	38.26	Dolomite	Aim	-0.38	-2.18
NI12.2	12.20	38.53	Dolomite	Aim	-0.20	-0.76
NI12.8	12.80	39.07	Dolomite	Aim	0.38	-1.60
NI13.5	13.50	39.70	Dolomite	Aim	-0.16	-1.84
NI14.5	14.50	40.59	Dolomite	Aim	-0.32	-2.52
NI15	15.00	41.04	Dolomite	Aim	-0.60	-1.37
NI15.5	15.50	41.49	Dolomite	Aim	-0.29	-3.22
NI17	17.00	42.83	Dolomite	Aim	-0.41	-3.80
NI18	18.00	43.73	Dolomite	Aim	-0.35	-2.31
NI19	19.00	44.63	Dolomite	Aim	-0.26	-1.49
NI20	20.00	45.52	Dolomite	Aim	-0.55	-2.06
NI21	21.00	46.42	Dolomite	Aim	-0.77	-3.04
NI22	22.00	47.31	Dolomite	Aim	-0.53	-3.10
NI23	23.00	48.21	Dolomite	Aim	-0.31	-0.10
NI24	24.00	49.11	Dolomite	Aim	-0.07	-2.65
NI25	25.00	50.00	Dolomite	Aim	-0.45	-1.72
*NI25	25.00	50.00	Dolomite	Aim	-0.40	-3.80
NI25.5	25.50	50.45	Dolomite	Aim	-0.46	-1.74
NI26.5	26.50	51.35	Dolomite	Aim	0.05	-2.81
NI27	27.00	51.79	Dolomite	Aim	-0.52	-2.70
NI28	28.00	52.69	Dolomite	Aim	-0.88	-1.12
NI28.2	28.20	52.87	Dolomite	Aim	-0.97	-2.60
NI29	29.00	53.59	Dolomite	Aim	-0.84	-2.63
NI30	30.00	54.48	Dolomite	Aim	-0.65	-5.06
NI30.5	30.50	54.93	Dolomite	Aim	-1.22	-0.86
NI30.7	30.70	55.11	Dolomite	Aim	-1.19	-7.94
NI31.1	31.10	55.47	Dolomite	Aim	-0.79	-0.92
NI32	32.00	56.28	Dolomite	Aim	-0.83	-1.15
NI33	33.00	57.17	Dolomite	Aim	-0.76	-5.28
NI33.9	33.90	57.98	Dolomite	Aim	-1.02	-1.21
NI35.2	35.20	59.14	Dolomite	Aim	-0.78	-0.08
NI36	36.00	59.86	Dolomite	Aim	-0.89	0.12

NI37	37.00	60.76	Dolomite	Aim	-0.73	0.37
NI38	38.00	61.65	Dolomite	Aim	-1.04	-1.24
NI38.5	38.50	62.10	Dolomite	Aim	-0.88	-2.26
NII0	68.80	96.40	Dolomite	Aim	0.55	-4.40
NII0.3	69.10	96.70	Dolomite	Aim	0.61	-3.34
NII0.6	69.40	97.00	Dolomite	Aim	0.07	-5.61
NII1	69.80	97.40	Dolomite	Aim	0.72	-4.11
NII1.5	70.30	97.90	Dolomite	Aim	0.34	-4.52
NII1.6	70.40	98.00	Dolomite	Aim	0.50	-4.92
NII2.7	71.50	99.10	Dolomite	Aim	0.36	-5.38
NII2.8	71.60	99.20	Dolomite	Aim	0.19	-5.57
NII3	71.80	99.40	Dolomite	Aim	-0.47	-7.33
NII5	73.80	101.40	Limestone	Aim	1.09	-4.51
NII5.4	74.20	101.80	Limestone	Aim	1.01	-4.16
NII5.8	74.60	102.20	Dolomite	Aim	1.84	-3.46
NII6	74.80	102.40	Dolomite	Aim	0.21	-7.34
NII6.2	75.00	102.60	Dolomite	Aim	1.09	-3.74
NII6.5	75.30	102.90	Dolomite	Ust'-Yudoma	0.84	-5.83
NII7	75.80	103.36	Dolomite	Ust'-Yudoma	1.10	-4.04
NII8	76.80	104.28	Dolomite	Ust'-Yudoma	0.94	-7.21
NII9	77.80	105.20	Dolomite	Ust'-Yudoma	1.37	-9.01
NII10	78.80	106.13	Dolomite	Ust'-Yudoma	1.54	-8.95
NII11	79.80	107.05	Dolomite	Ust'-Yudoma	1.72	-7.96
NII12	80.80	107.97	Dolomite	Ust'-Yudoma	1.76	-8.41
NII13	81.80	108.89	Dolomite	Ust'-Yudoma	1.81	-10.03
NII13.7	82.50	109.54	Dolomite	Ust'-Yudoma	1.93	-9.92
NII14.5	83.30	110.27	Dolomite	Ust'-Yudoma	2.26	-9.10
NII16	84.80	111.66	Dolomite	Ust'-Yudoma	0.77	-9.66
NII17	85.80	112.58	Dolomite	Ust'-Yudoma	0.54	-8.13
NII18	86.80	113.50	Dolomite	Ust'-Yudoma	1.15	-6.91
NII19	87.80	114.42	Dolomite	Ust'-Yudoma	0.83	-8.79
NII20	88.80	115.34	Dolomite	Ust'-Yudoma	0.69	-7.33
NII21.5	90.30	116.73	Dolomite	Ust'-Yudoma	0.70	-9.92
NII22	90.80	117.19	Dolomite	Ust'-Yudoma	0.63	-9.21
NII23	91.80	118.11	Dolomite	Ust'-Yudoma	0.62	-8.60

NII23.8	92.60	118.85	Dolomite	Ust'-Yudoma	-0.02	-7.36
NIII0	92.60	118.85	Dolomite	Ust'-Yudoma	0.20	-9.12
NIII1	93.60	119.77	Dolomite	Ust'-Yudoma	0.25	-4.72
NIII2	94.60	120.69	Dolomite	Ust'-Yudoma	0.34	-6.92
NIII3	95.60	121.61	Dolomite	Ust'-Yudoma	0.35	-5.57
NIII4	96.60	122.53	Dolomite	Ust'-Yudoma	0.16	-5.02
NIII5	97.60	123.45	Dolomite	Ust'-Yudoma	-0.19	-4.10
NIII6	98.60	124.38	Dolomite	Ust'-Yudoma	0.38	-4.74
NIII7	99.60	125.30	Dolomite	Ust'-Yudoma	-0.39	-7.08
NIII8.2	100.80	126.40	Dolomite	Ust'-Yudoma	0.94	-8.82
NIII9	101.60	127.14	Dolomite	Ust'-Yudoma	-0.24	-7.09
NIII10	102.60	128.06	Dolomite	Ust'-Yudoma	1.15	-9.48
NIII11	103.60	128.98	Dolomite	Ust'-Yudoma	0.62	-7.76
NIII12	104.60	129.91	Dolomite	Ust'-Yudoma	0.22	-7.67
NIII13	105.60	130.83	Dolomite	Ust'-Yudoma	0.56	-8.91
NIII14	106.60	131.75	Dolomite	Ust'-Yudoma	0.43	-9.67
NIII15	107.60	132.67	Dolomite	Ust'-Yudoma	0.72	-9.50
NIII16	108.60	133.59	Dolomite	Ust'-Yudoma	0.83	-4.76
NIII17	109.60	134.51	Dolomite	Ust'-Yudoma	0.75	-5.10
NIII17.8	110.40	135.25	Dolomite	Ust'-Yudoma	1.20	-9.83
NIII19	111.60	136.36	Dolomite	Ust'-Yudoma	1.59	-10.29
NIII20	112.60	137.28	Dolomite	Ust'-Yudoma	-0.22	-6.33
NIII21	113.60	138.20	Dolomite	Ust'-Yudoma	1.19	-7.14
NIII22	114.60	139.12	Dolomite	Ust'-Yudoma	2.17	-8.99
NIII23	115.60	140.04	Dolomite	Ust'-Yudoma	1.77	-7.88
NIII24	116.60	140.97	Dolomite	Ust'-Yudoma	1.33	-8.84
NIII25	117.60	141.89	Dolomite	Ust'-Yudoma	1.91	-9.41
NIII26	118.60	142.81	Dolomite	Ust'-Yudoma	1.41	-9.21
NIII27	119.60	143.73	Dolomite	Ust'-Yudoma	0.90	-9.60
NIII28	120.60	144.65	Dolomite	Ust'-Yudoma	1.09	-9.73
NIII29	121.60	145.57	Dolomite	Ust'-Yudoma	0.80	-9.93
NIII30	122.60	146.50	Dolomite	Ust'-Yudoma	0.74	-10.05
NIII31	123.60	147.42	Dolomite	Ust'-Yudoma	1.16	-9.97
NIII32	124.60	148.34	Dolomite	Ust'-Yudoma	1.19	-10.93
NIII33	125.60	149.26	Dolomite	Ust'-Yudoma	0.32	-9.42

NIII34	126.60	150.18	Dolomite	Ust'-Yudoma	1.26	-9.38
NIII35	127.60	151.10	Dolomite	Ust'-Yudoma	1.59	-9.36
NIII36	128.60	152.03	Dolomite	Ust'-Yudoma	0.94	-9.79
NIII37	129.60	152.95	Dolomite	Ust'-Yudoma	0.86	-10.36
NIII38	130.60	153.87	Dolomite	Ust'-Yudoma	1.21	-8.79
NIII39	131.60	154.79	Dolomite	Ust'-Yudoma	0.91	-8.55
NIII40	132.60	155.71	Dolomite	Ust'-Yudoma	0.78	-9.43
NIII40.8	133.40	156.45	Dolomite	Ust'-Yudoma	1.79	-9.76
NIII42	134.60	157.56	Dolomite	Ust'-Yudoma	1.50	-10.06
NIII43	135.60	158.48	Dolomite	Ust'-Yudoma	0.66	-8.78
NIII44	136.60	159.40	Dolomite	Ust'-Yudoma	0.14	-9.49
NIII45	137.60	160.32	Dolomite	Ust'-Yudoma	0.65	-8.75
NIII46	138.60	161.24	Dolomite	Ust'-Yudoma	-0.36	-8.76
NIII47	139.60	162.16	Dolomite	Ust'-Yudoma	2.02	-8.35
NIII48	140.60	163.09	Dolomite	Ust'-Yudoma	2.06	-8.04
NIII49	141.60	164.01	Dolomite	Ust'-Yudoma	1.53	-8.88
NIII49.8	142.40	164.75	Dolomite	Ust'-Yudoma	1.55	-8.27
NIII51	143.60	165.85	Dolomite	Ust'-Yudoma	0.69	-8.51
NIII52	144.60	166.77	Dolomite	Ust'-Yudoma	1.44	-8.72
NIII54	146.60	168.62	Dolomite	Ust'-Yudoma	1.77	-9.03
NIII55	147.60	169.54	Dolomite	Ust'-Yudoma	1.40	-8.71
NIII56	148.60	170.46	Dolomite	Ust'-Yudoma	0.76	-10.15
NIII57.5	150.10	171.84	Dolomite	Ust'-Yudoma	0.08	-8.57
NIII59	151.60	173.23	Dolomite	Ust'-Yudoma	0.50	-7.86
NIII59.8	152.40	173.96	Dolomite	Ust'-Yudoma	0.17	-7.95
NIII61	153.60	175.07	Dolomite	Ust'-Yudoma	-0.53	-5.25
NIII62	154.60	175.99	Dolomite	Ust'-Yudoma	-1.84	-8.26
NIII63	155.60	176.91	Dolomite	Ust'-Yudoma	-1.24	-8.65
NIII64	156.60	177.83	Dolomite	Ust'-Yudoma	-1.32	-9.08
NIII65	157.60	178.76	Dolomite	Ust'-Yudoma	-1.15	-7.19
NIII67	159.60	180.60	Dolomite	Ust'-Yudoma	-0.52	-8.51
NIII68	160.60	181.52	Dolomite	Ust'-Yudoma	0.00	-10.61
NIII69	161.60	182.44	Dolomite	Ust'-Yudoma	-2.18	-8.56
NIII71	163.60	184.29	Dolomite	Ust'-Yudoma	-0.60	-6.95
NIII72	164.60	185.21	Dolomite	Ust'-Yudoma	-3.59	-9.10

NIII73	165.60	186.13	Dolomite	Ust'-Yudoma	-0.72	-9.18
NIII74	166.60	187.05	Dolomite	Ust'-Yudoma	-2.53	-8.66
NIII75	167.60	187.97	Dolomite	Ust'-Yudoma	-1.42	-8.61
NIII76	168.60	188.89	Dolomite	Ust'-Yudoma	-1.97	-8.62
NIII77	169.60	189.82	Dolomite	Ust'-Yudoma	-2.77	-7.84
NIII78	170.60	190.74	Dolomite	Ust'-Yudoma	-1.64	-9.02
NIII79	171.60	191.66	Dolomite	Ust'-Yudoma	-1.98	-8.78
NIII80	172.60	192.58	Dolomite	Ust'-Yudoma	-1.31	-8.39
NIII81	173.60	193.50	Dolomite	Ust'-Yudoma	-1.27	-8.05
NIII82	174.60	194.42	Dolomite	Ust'-Yudoma	0.33	-8.65
NIII83	175.60	195.35	Dolomite	Ust'-Yudoma	0.37	-8.66
NIII84	176.60	196.27	Dolomite	Ust'-Yudoma	1.30	-9.01
NIII85	177.60	197.19	Dolomite	Ust'-Yudoma	1.04	-8.04
NIII86	178.60	198.11	Dolomite	Ust'-Yudoma	0.89	-9.55
NIII87	179.60	199.03	Dolomite	Ust'-Yudoma	-0.52	-8.94
NIII88	180.60	199.95	Dolomite	Ust'-Yudoma	-0.19	-8.58
NIII89	181.60	200.88	Dolomite	Ust'-Yudoma	-0.96	-8.66
NIII90	182.60	201.80	Dolomite	Ust'-Yudoma	0.84	-10.00
NIII91	183.60	202.72	Dolomite	Ust'-Yudoma	-0.19	-10.71
NIII92	184.60	203.64	Dolomite	Ust'-Yudoma	0.60	-10.00
NIII93	185.60	204.56	Dolomite	Ust'-Yudoma	0.14	-9.94
NIII94	186.60	205.48	Dolomite	Ust'-Yudoma	-0.48	-9.12
NIII95	187.60	206.41	Dolomite	Ust'-Yudoma	1.93	-9.86
NIII96	188.60	207.33	Dolomite	Ust'-Yudoma	0.32	-8.18
NIII97	189.60	208.25	Dolomite	Ust'-Yudoma	0.48	-10.40
NIII98	190.60	209.17	Dolomite	Ust'-Yudoma	1.38	-9.26
NIII99	191.60	210.09	Dolomite	Ust'-Yudoma	2.03	-9.66
NIII100	192.60	211.01	Dolomite	Ust'-Yudoma	1.85	-9.11
NIII101	193.60	211.94	Dolomite	Ust'-Yudoma	1.73	-8.29
NIII102	194.60	212.86	Dolomite	Ust'-Yudoma	1.64	-8.72
NIII103	168.60	188.89	Dolomite	Ust'-Yudoma	-0.31	-8.72
NIII104	169.60	189.82	Dolomite	Ust'-Yudoma	-1.70	-8.57
NIII105	170.60	190.74	Dolomite	Ust'-Yudoma	-2.08	-8.08
NIII106	171.60	191.66	Dolomite	Ust'-Yudoma	-1.82	-8.88
NIII107	172.60	192.58	Dolomite	Ust'-Yudoma	-2.93	-8.54

NIII108	173.60	193.50	Dolomite	Ust'-Yudoma	-3.32	-8.52
NIII109	174.60	194.42	Dolomite	Ust'-Yudoma	-2.36	-7.96
NIII110	175.60	195.35	Dolomite	Ust'-Yudoma	-0.07	-8.61
NIII111	176.60	196.27	Dolomite	Ust'-Yudoma	-0.07	-8.40
NIII112	177.60	197.19	Dolomite	Ust'-Yudoma	-0.04	-8.89
NIII113	178.60	198.11	Dolomite	Ust'-Yudoma	0.48	-8.16
NIII114	179.60	199.03	Dolomite	Ust'-Yudoma	-0.70	-8.63
NIII115	180.60	199.95	Dolomite	Ust'-Yudoma	-0.57	-9.57
NIII116	181.60	200.88	Dolomite	Ust'-Yudoma	-0.59	-9.17
NIII117	182.60	201.80	Dolomite	Ust'-Yudoma	0.39	-9.72
NIII118	183.60	202.72	Dolomite	Ust'-Yudoma	0.67	-8.50
NIII119	184.60	203.64	Dolomite	Ust'-Yudoma	0.74	-8.54
NIII120	185.60	204.56	Dolomite	Ust'-Yudoma	-0.68	-8.99
NIII121	186.60	205.48	Dolomite	Ust'-Yudoma	1.02	-8.87
NIII122	187.60	206.41	Dolomite	Ust'-Yudoma	1.43	-8.75
NIII123	188.60	207.33	Dolomite	Ust'-Yudoma	1.85	-10.23
NIII124	189.60	208.25	Dolomite	Ust'-Yudoma	1.90	-9.23
NIII125	190.60	209.17	Dolomite	Ust'-Yudoma	2.15	-8.99
NIII126	191.60	210.09	Dolomite	Ust'-Yudoma	1.89	-8.69
NIII127	192.60	211.01	Dolomite	Ust'-Yudoma	2.23	-10.32
NIII128	193.60	211.94	Dolomite	Ust'-Yudoma	1.62	-7.67
NIII129	194.60	212.86	Dolomite	Ust'-Yudoma	2.05	-9.27
NIII130	195.60	213.78	Dolomite	Ust'-Yudoma	1.55	-8.84
NIII131	196.60	214.70	Dolomite	Ust'-Yudoma	2.12	-9.13
NIII132	197.60	215.62	Dolomite	Ust'-Yudoma	1.82	-8.81
NIII133	198.60	216.54	Dolomite	Ust'-Yudoma	2.09	-9.44
NIII134	199.60	217.47	Dolomite	Ust'-Yudoma	1.99	-9.38
NIII135	200.60	218.39	Dolomite	Ust'-Yudoma	1.92	-9.26
NIII136	201.60	219.31	Dolomite	Ust'-Yudoma	1.86	-8.39
NIII137	202.60	220.23	Dolomite	Ust'-Yudoma	1.63	-8.13
NIII138	203.60	221.15	Dolomite	Ust'-Yudoma	1.35	-8.97
NIII139	204.60	222.08	Dolomite	Ust'-Yudoma	2.03	-8.17
NIII140	205.60	223.00	Dolomite	Ust'-Yudoma	1.15	-8.38
NIII141	206.60	223.92	Dolomite	Ust'-Yudoma	1.31	-9.08
NIII142	207.60	224.84	Dolomite	Ust'-Yudoma	1.51	-9.30

NIII143	208.60	225.76	Dolomite	Ust'-Yudoma	1.80	-9.30
NIII144	209.60	226.68	Dolomite	Ust'-Yudoma	1.83	-8.00
NIII145	210.60	227.61	Dolomite	Ust'-Yudoma	1.07	-8.21
NIII146	211.60	228.53	Dolomite	Ust'-Yudoma	1.42	-8.16
NIII147	212.60	229.45	Dolomite	Ust'-Yudoma	1.36	-8.70
NIII148	213.60	230.37	Dolomite	Ust'-Yudoma	1.75	-8.32
NIII149	214.60	231.29	Dolomite	Ust'-Yudoma	1.52	-10.31
NIII150	215.60	232.21	Dolomite	Ust'-Yudoma	1.43	-9.65
NIII151	216.60	233.14	Dolomite	Ust'-Yudoma	1.38	-8.44
NIII152	217.60	234.06	Dolomite	Ust'-Yudoma	1.21	-10.39
NIII153	218.60	234.98	Dolomite	Ust'-Yudoma	1.88	-8.90
NIII154	219.60	235.90	Dolomite	Ust'-Yudoma	1.42	-9.71
NIII155	220.60	236.82	Dolomite	Ust'-Yudoma	1.30	-9.88
NIII156	221.60	237.74	Dolomite	Ust'-Yudoma	1.21	-10.60
NIII157	222.60	238.67	Dolomite	Ust'-Yudoma	1.27	-10.01
NIII158	223.60	239.59	Dolomite	Ust'-Yudoma	1.64	-9.29
NIII159	224.60	240.51	Dolomite	Ust'-Yudoma	1.15	-9.33
NIII160	225.60	241.43	Dolomite	Ust'-Yudoma	1.08	-8.78
NIII161	226.60	242.35	Dolomite	Ust'-Yudoma	1.06	-7.84
NIII162	227.60	243.27	Dolomite	Ust'-Yudoma	1.12	-8.87
NIII163	228.60	244.20	Dolomite	Ust'-Yudoma	1.35	-7.91
NIII164	229.60	245.12	Dolomite	Ust'-Yudoma	0.82	-9.20
NIII166	231.60	246.96	Dolomite	Ust'-Yudoma	1.48	-7.23
NIII167	232.60	247.88	Dolomite	Ust'-Yudoma	0.69	-9.03
NIII168	233.60	248.80	Dolomite	Ust'-Yudoma	1.07	-10.01
NIII169	234.60	249.73	Dolomite	Ust'-Yudoma	1.10	-10.38
NIII170	235.60	250.65	Dolomite	Ust'-Yudoma	1.15	-8.42
NIII171	236.60	251.57	Dolomite	Ust'-Yudoma	1.03	-9.02
NIII172	237.60	252.49	Dolomite	Ust'-Yudoma	1.76	-8.20
NIII173	238.60	253.41	Dolomite	Ust'-Yudoma	1.58	-8.63
NIII174	239.60	254.33	Dolomite	Ust'-Yudoma	1.40	-8.82
NIII175	240.60	255.26	Dolomite	Ust'-Yudoma	1.67	-9.23
NIII176	241.60	256.18	Dolomite	Ust'-Yudoma	1.69	-8.86
NIII176.9	242.50	257.01	Dolomite	Ust'-Yudoma	1.94	-9.34
NIII178	243.60	258.02	Dolomite	Ust'-Yudoma	1.24	-8.33

NIII179	244.60	258.94	Dolomite	Ust'-Yudoma	1.95	-9.04
NIII181	246.60	260.79	Dolomite	Ust'-Yudoma	0.73	-9.66
NIII182	247.60	261.71	Dolomite	Ust'-Yudoma	0.96	-9.12
NIII183	248.60	262.63	Dolomite	Ust'-Yudoma	1.31	-7.97
NIII193	258.60	271.85	Dolomite	Ust'-Yudoma	1.65	-9.05
NIII194	259.60	272.77	Dolomite	Ust'-Yudoma	1.54	-9.15
NIII194.6	260.20	273.32	Dolomite	Ust'-Yudoma	1.55	-9.86
NIII195	260.60	273.69	Dolomite	Ust'-Yudoma	1.65	-8.77
NIII196	261.60	274.61	Dolomite	Ust'-Yudoma	1.71	-9.78
NIII197	262.60	275.53	Dolomite	Ust'-Yudoma	1.69	-8.97
NIII198	263.60	276.46	Dolomite	Ust'-Yudoma	1.12	-9.27
NIV0	271.60	283.83	Dolomite	Ust'-Yudoma	0.65	-8.47
NIV1	272.60	284.75	Dolomite	Ust'-Yudoma	-0.37	-8.71
NIV2	273.60	285.67	Dolomite	Ust'-Yudoma	-0.30	-9.92
NIV3	274.60	286.59	Dolomite	Ust'-Yudoma	0.66	-9.00
NIV4	275.60	287.52	Dolomite	Ust'-Yudoma	-0.15	-7.49
NIV5	276.60	288.44	Dolomite	Ust'-Yudoma	0.70	-8.16
NIV6	277.60	289.36	Dolomite	Ust'-Yudoma	0.59	-10.07
NIV7	278.60	290.28	Dolomite	Ust'-Yudoma	-0.32	-7.19
NIV9	280.60	292.12	Dolomite	Ust'-Yudoma	1.27	-8.57
NIV10	281.60	293.05	Dolomite	Ust'-Yudoma	0.99	-8.54
NIV11	282.60	293.97	Dolomite	Ust'-Yudoma	0.18	-10.71
NIV12	283.60	294.89	Limestone	Ust'-Yudoma	-0.01	-10.32
NIV13	284.60	295.81	Limestone	Ust'-Yudoma	0.26	-8.73
NIV13.5	285.10	296.27	Limestone	Ust'-Yudoma	-0.15	-8.03
NIV14	285.60	296.73	Limestone	Ust'-Yudoma	0.11	-6.76
NIV14.5	286.10	297.19	Limestone	Ust'-Yudoma	0.79	-9.41
NIV15	286.60	297.65	Limestone	Ust'-Yudoma	-1.65	-10.00
NIV16	287.60	298.58	Limestone	Ust'-Yudoma	0.20	-7.02
NIV16.2	287.80	298.76	Limestone	Ust'-Yudoma	0.12	-7.47
NIV17	288.60	299.50	Limestone	Ust'-Yudoma	0.00	-6.84
NIV18	289.60	300.42	Limestone	Ust'-Yudoma	0.10	-7.10
NIV18.5	290.10	300.88	Limestone	Ust'-Yudoma	-0.13	-7.22
NIV19	290.60	301.34	Limestone	Ust'-Yudoma	-0.07	-10.15
NIV19.5	291.10	301.80	Limestone	Ust'-Yudoma	0.25	-7.23

NIV20	291.60	302.26	Limestone	Ust'-Yudoma	-0.15	-6.31
NIV20.5	292.10	302.72	Limestone	Ust'-Yudoma	0.19	-7.99
NIV20.8	292.40	303.00	Limestone	Ust'-Yudoma	1.32	-7.50
Samples collected by Andrey Zhuravlev and Rachel Wood. Samples analysed at the Wolfson Laboratory, School of GeoSciences, Grant Institute, University of Edinburgh.						
Nuuchchalakh Valley (NV, 59°25'8.94"N, 136°15'9.78"E)						
4	27.60	27.60	Dolostone	Aim	-0.65	-5.64
5A	27.10	27.10	Silty Dolostone	Aim	-0.52	-4.57
6	29.60	29.60	Silty Dolostone	Aim	0.01	-3.69
7	31.60	31.60	Dolostone	Aim	0.33	-4.00
8	33.60	33.60	Dolostone	Aim	0.55	-3.93
8a	35.60	35.60	Dolostone	Aim	-0.11	-2.75
10	39.60	39.60	Dolostone	Aim	-0.39	-3.62
11	41.60	41.60	Dolostone	Aim	-0.44	-3.20
12	43.60	43.60	Dolostone	Aim	-0.24	-3.74
15	49.60	49.60	Dolostone	Aim	-0.22	-2.44
16	51.60	51.60	Dolostone	Aim	-0.30	-3.31
17	53.60	53.60	Dolostone	Aim	0.08	-2.84
19	58.10	58.10	Dolostone	Aim	-0.81	-2.33
20	60.10	60.10	Dolostone	Aim	-0.41	-2.72
21	62.10	62.10	Dolostone	Aim	-0.82	-3.17
24	65.70	65.70	Dolomite cemented siltstone	Aim	-0.67	-2.51
25	67.10	67.10	Dolomite cemented siltstone	Aim	-0.47	-1.73
26	69.10	69.10	Dolomite cemented siltstone	Aim	-0.04	-1.68
27	70.60	70.60	Dolomite cemented siltstone	Aim	0.37	-1.80
28	72.10	72.10	Dolomite cemented siltstone	Aim	0.44	-1.13
29	74.10	74.10	Dolomite cemented siltstone	Aim	0.45	-2.07
30	75.90	75.90	Dolomite cemented siltstone	Aim	0.67	-1.82
31	77.40	77.40	Dolomite cemented siltstone	Aim	0.40	-1.90
32	79.40	79.40	Dolomite cemented	Aim	0.25	-1.70

			siltstone			
33	81.90	81.90	Dolomite cemented siltstone	Aim	0.47	-1.63
34	83.70	83.70	Dolomite cemented siltstone	Aim	0.56	-2.73
35	85.20	85.20	Dolomite cemented siltstone	Aim	0.17	-4.20
36	87.20	87.20	Dolomite cemented siltstone	Aim	0.90	-3.89
37	89.20	89.20	Dolomite cemented siltstone	Aim	0.82	-3.65
38	90.90	90.90	Dolomite	Aim	0.80	-2.47
39	92.40	92.40	Dolomite	Aim	0.57	-3.14
40	94.40	94.40	Dolomite	Aim	0.51	-3.41
42	98.40	98.40	Stromatolite	Aim	0.82	-4.05
43	98.90	98.90	Dolomite	Aim	-0.22	-6.61
51	99.90	99.90	Dolomite cemented siltstone	Aim	-0.49	-6.57
53	101.90	101.90	Limestone	Aim	0.76	-4.15
55 A AND B	105.40	105.40	Dolomite	Aim	1.55	-8.44
57	106.40	106.40	Dolomite	Ust'-Yudoma	1.57	-8.80
58	107.40	107.40	Dolomite	Ust'-Yudoma	1.75	-9.20
59	108.40	108.40	Dolomite	Ust'-Yudoma	1.33	-10.79
60	111.10	111.10	Dolomite	Ust'-Yudoma	2.010	-10.607
63	114.40	114.40	Dolomite	Ust'-Yudoma	0.12	-10.50
64	116.40	116.40	Dolomite	Ust'-Yudoma	0.61	-9.10
65	118.90	118.90	Dolomite	Ust'-Yudoma	0.69	-10.21
66	120.40	120.40	Dolomite	Ust'-Yudoma	0.66	-9.02
81A	123.00	123.00	Dolomite	Ust'-Yudoma	0.397	-5.169
81B	123.00	123.00	Dolomite	Ust'-Yudoma	0.252	-6.724
83	127.00	127.00	Dolomite	Ust'-Yudoma	0.205	-6.456
86	133.00	133.00	Dolomite	Ust'-Yudoma	0.47	-10.88
87A	125.00	125.00	Dolomite	Ust'-Yudoma	0.97	-11.35
87B	125.00	125.00	Dolomite	Ust'-Yudoma	0.77	-10.56
87C	135.00	135.00	Dolomite	Ust'-Yudoma	0.69	-6.42
88A	136.00	136.00	Dolomite	Ust'-Yudoma	0.97	-11.35
88B	136.00	136.00	Dolomite	Ust'-Yudoma	0.60	-11.17
89	137.00	137.00	Dolomite	Ust'-Yudoma	1.09	-5.19

90	139.00	139.00	Dolomite	Ust'-Yudoma	0.24	-7.69
25M	142.00	142.00	Dolomite	Ust'-Yudoma	2.00	-9.82
28M	144.48	144.48	Dolomite	Ust'-Yudoma	0.67	-10.51
29M	145.30	145.30	Dolomite	Ust'-Yudoma	0.60	-10.66
33M	147.78	147.78	Dolomite	Ust'-Yudoma	0.41	-10.18
34M	150.26	150.26	Dolomite	Ust'-Yudoma	0.99	-11.32
36M	151.09	151.09	Dolomite	Ust'-Yudoma	1.28	-9.44
37M	152.74	152.74	Dolomite	Ust'-Yudoma	1.07	-10.82
39M	153.57	153.57	Dolomite	Ust'-Yudoma	0.77	-9.54
40.8M	155.22	155.22	Dolomite	Ust'-Yudoma	1.51	-10.88
45M	158.52	158.52	Dolomite	Ust'-Yudoma	0.00	-10.02
48M	160.17	160.17	Dolomite	Ust'-Yudoma	2.05	-8.84
49M	162.65	162.65	Dolomite	Ust'-Yudoma	1.13	-9.18
51M	163.48	163.48	Dolomite	Ust'-Yudoma	-0.02	-10.52
54M	165.96	165.96	Dolomite	Ust'-Yudoma	1.44	-10.46
57.5M	168.85	168.85	Dolomite	Ust'-Yudoma	0.22	-8.77
61M	171.74	171.74	Dolomite	Ust'-Yudoma	0.01	-4.85
62M	172.57	172.57	Dolomite	Ust'-Yudoma	-1.06	-9.21
92	173.39	173.39	Dolomite	Ust'-Yudoma	-1.22	-8.21
93	175.04	175.04	Dolomite	Ust'-Yudoma	-1.22	-7.78
94	176.70	176.70	Dolomite	Ust'-Yudoma	-0.35	-10.49
95	178.35	178.35	Dolomite	Ust'-Yudoma	-1.88	-3.56
96	180.00	180.00	Dolomite	Ust'-Yudoma	-2.23	-9.48
98	192.00	192.00	Dolomite	Ust'-Yudoma	0.26	-10.57
99	194.00	194.00	Dolomite	Ust'-Yudoma	0.29	-9.09
100	196.00	196.00	Dolomite	Ust'-Yudoma	0.13	-9.90
101	198.00	198.00	Dolomite	Ust'-Yudoma	0.73	-9.90
102	200.00	200.00	Dolomite	Ust'-Yudoma	0.13	-10.10
103	202.00	202.00	Dolomite	Ust'-Yudoma	0.11	-10.36
105	206.00	206.00	Dolomite	Ust'-Yudoma	-0.18	-9.20
107	165.00	165.00	Dolomite	Ust'-Yudoma	1.30	-8.69
108	167.10	167.10	Dolomite	Ust'-Yudoma	1.05	-9.61
109	169.20	169.20	Dolomite	Ust'-Yudoma	1.91	-8.68
110	171.30	171.30	Dolomite	Ust'-Yudoma	-0.69	-8.47
111	173.40	173.40	Dolomite	Ust'-Yudoma	-1.73	-10.14

103a	175.50	175.50	Dolomite	Ust'-Yudoma	0.05	-10.76
105a	177.60	177.60	Dolomite	Ust'-Yudoma	0.35	-10.18
108.5a	181.28	181.28	Dolomite	Ust'-Yudoma	-0.62	-9.87
113	186.00	186.00	Dolomite	Ust'-Yudoma	-1.56	-8.86
117	209.82	209.82	Dolomite	Ust'-Yudoma	1.74	-8.94
119	211.64	211.64	Dolomite	Ust'-Yudoma	2.27	-10.19
121	213.45	213.45	Dolomite	Ust'-Yudoma	2.11	-10.05
123	215.27	215.27	Dolomite	Ust'-Yudoma	1.91	-8.97
125	217.09	217.09	Dolomite	Ust'-Yudoma	2.04	-10.53
127	220.73	220.73	Dolomite	Ust'-Yudoma	2.10	-10.11
129	222.55	222.55	Dolomite	Ust'-Yudoma	1.97	-9.03
131	224.36	224.36	Dolomite	Ust'-Yudoma	1.71	-9.46
133	226.18	226.18	Dolomite	Ust'-Yudoma	1.34	-9.33
137	229.82	229.82	Dolomite	Ust'-Yudoma	1.67	-9.49
139	231.64	231.64	Dolomite	Ust'-Yudoma	1.77	-10.26
141	233.45	233.45	Dolomite	Ust'-Yudoma	1.24	-9.54
143	235.27	235.27	Dolomite	Ust'-Yudoma	1.22	-9.35
145	237.09	237.09	Dolomite	Ust'-Yudoma	1.42	-10.80
147	238.91	238.91	Dolomite	Ust'-Yudoma	1.03	-10.54
145/2	240.73	240.73	Dolomite	Ust'-Yudoma	0.98	-11.41
147/2	242.55	242.55	Dolomite	Ust'-Yudoma	1.33	-10.77
149/2	244.36	244.36	Dolomite	Ust'-Yudoma	1.44	-10.28
151/2	246.18	246.18	Dolomite	Ust'-Yudoma	1.70	-8.67
153/2	248.00	248.00	Dolomite	Ust'-Yudoma	0.84	-9.52
157/3	251.64	251.64	Dolomite	Ust'-Yudoma	1.09	-9.55
159/3	253.45	253.45	Dolomite	Ust'-Yudoma	1.16	-10.05
161	255.27	255.27	Dolomite	Ust'-Yudoma	1.22	-9.03
163/4	257.09	257.09	Dolomite	Ust'-Yudoma	0.93	-10.63
170/5	260.73	260.73	Dolomite	Ust'-Yudoma	1.61	-10.21
180	262.55	262.55	Dolomite	Ust'-Yudoma	1.27	-10.75
184	266.18	266.18	Dolomite	Ust'-Yudoma	0.90	-11.13
186.4	268.00	268.00	Dolomite	Ust'-Yudoma	1.35	-8.92
190	275.73	275.73	Dolomite	Ust'-Yudoma	0.95	-8.39
191	286.18	286.18	Dolomite	Ust'-Yudoma	1.72	-9.23
12m	278.91	278.91	Dolomite	Ust'-Yudoma	1.73	-10.03

13m	279.82	279.82	Dolomite	Ust'-Yudoma	1.88	-9.61
14m	280.73	280.73	Dolomite	Ust'-Yudoma	1.46	-9.15
0m	288.00	288.00	Dolomite	Ust'-Yudoma	0.48	-9.40
4m	291.64	291.64	Dolomite	Ust'-Yudoma	-0.33	-7.18
8m	295.27	295.27	Dolomite	Ust'-Yudoma	0.86	-9.74
16/2m	302.55	302.55	Limestone	Ust'-Yudoma?	0.11	-8.29

Supplementary figures S1-S7 for:

Implications of an integrated late Ediacaran to early Cambrian stratigraphy of the Siberian Platform, Russia

Fred T. Bowyer[1*], Andrey Yu. Zhuravlev[2], Rachel Wood[1], Fangchen Zhao[3], Sergei S. Sukhov[4], Ruaridh D. Alexander[1], Simon W. Poulton[5], and Maoyan Zhu[3,6*]

[1]School of GeoSciences, University of Edinburgh, James Hutton Road, Edinburgh EH9 3FE, UK.
[2]Department of Biological Evolution, Faculty of Biology, Lomonosov Moscow State University Leninskie Gory 1(12), Moscow 119234, Russia.
[3]State Key Laboratory of Palaeobiology and Stratigraphy, Nanjing Institute of Geology and Palaeontology and Center for Excellence in Life and Palaeoenvironment, Chinese Academy of Sciences, Nanjing 210008, China.
[4]Siberian Scientific Research Institute of Geology, Geophysics and Mineral Resources, Krasny prospect 67, Novosibirsk 630091, Russia.
[5]School of Earth and Environment, University of Leeds, Leeds LS2 9JT, UK.
[6]College of Earth and Planetary Sciences, University of Chinese Academy of Sciences, Beijing 10049, China.

Litho-, chemo- and biostratigraphic correlation charts for the Ediacaran to lower Cambrian (Terreneuvian and Series 2) of the Siberian Platform

*Correspondence to: fred.bowyer@ed.ac.uk or myzhu@nigpas.ac.cn

Figure S1
Major pre-Cambrian to lower Cambrian study regions (after Astashkin et al., 1991, Sovetov, 2002 and Khomentovsky, 2008)

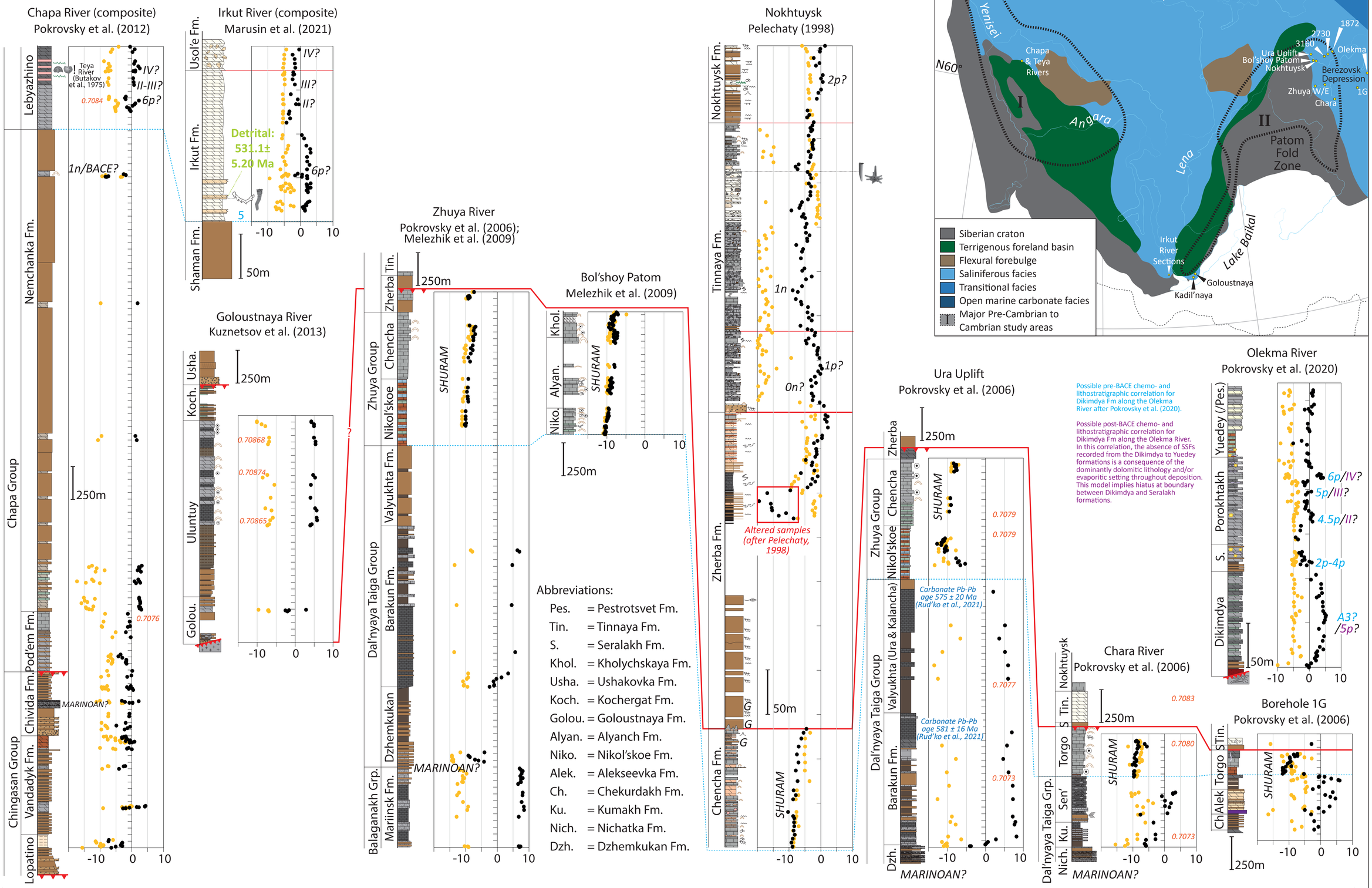
- Siberian craton
- Terrigenous foreland basin
- Flexural forebulge
- Saliniferous facies
- Transitional facies
- Open marine carbonate facies
- I Major Pre-Cambrian to Cambrian study areas

KARA SEA
LAPTEV SEA
SEA OF OKHOTSK
RUSSIA
CHINA
Taymyr
N70°
N60°
N50°
E120°
E130°
Khatanga
Anabar
Olenek
Lena
Aldan
Vilyuy
Kotuy
Nizhnyaya Tunguska River
Yenisei
Angara
Lake Baikal
Ulakhan-Ald'yarkhay
Bulkur Anticline
Chekurovka Anticline
Khorbusuonka
Olenek Kytyngeder
Ulakhan-Uekhtekh
Kotuykan
Kotuykan
Kugda
Ary-Mas-Yuryakh
Bol'shaya and Malaya Kuonamka sections
Norilsk
Igarka
Kulyumbe
Sukharikha
Sukharikha
Nizhnyaya Tunguska
SukhayaTunguska
A-703
S-706
O-286-1
E-343-0
O-252-0
Kh-322-0
SM-225-0
M-223-0
Sh-471
Yakutsk
Titary
Elanka
Labaya
Achchagy-Kyyry-Taas
Achchagy-Tuoydakh
Zhurinsky Mys
Isit'
2730
3160
1872
Nokh-tuysk
Olekma
Zhuya W/E Chara
1G
Ch-367
Ch-279
ZB-362-0
Nepa-Botuoba Uplift
Ura Uplift
Bol'shoy Patom
Suordakh
Yudoma
Sakhara
KY
NV
YMC
Nemnekey River
Dvortsy
Ulakhan-Sulugur
Selinde
Mount Konus
Chapa & Teya Rivers
Zhigalovo borehole
Bel'sk borehole
Irkut River Sections
Goloustnaya
Kadil'naya
I
II
III
IV
V
VI
VII
VIII
IX
X
XI

(I) Yenisei Range
1) Chapa River sections:
Geochemistry: Pokrovsky et al. (2012)
Section details: Pokrovsky et al. (2012)
2) Teya River section:
Geochemistry: Pokrovsky et al. (2012)
Section details: Pokrovsky et al. (2012)
Irkutsk Amphitheatre
3) Irkustk amphitheatre:
Boreholes (i) Bel'sk and (ii) Zhigalovo (Vinogradov et al., 2006a,b)
4) Irkut River composite section:
Geochemistry: Marusin et al. (2021)
Section details: Marusin et al. (2021)
(II) Baikal and Patom highlands
5) Ura Uplift:
Geochemistry: Pokrovsky et al. (2006); Rud'ko et al. (2017, 2020, 2021)
Section details: Pokrovsky et al. (2006); Rud'ko et al. (2017, 2020, 2021)
6) Ura Uplift: Nokhtuysk section, Lena River
Geochemistry: Pelechaty (1998); Khomentovsky et al. (2004, raw data not provided); Sochava et al. (1996)
Section details: Pelechaty (1998); Khomentovsky et al. (2004); Chumakov et al. (2013)
7) Bol'shoy Patom River:
Geochemistry: Melezhik et al. (2009)
Section details: Melezhik et al. (2009)
8) Zhuya River composite (Kadali and Zhuya rivers):
Geochemistry: Pokrovsky et al. (2006); Pokrovsky et al. (2021)
Section details: Pokrovsky et al. (2006); Pokrovsky et al. (2021)
9) Zhuya River East:
Geochemistry: Melezhik et al. (2009)
Section details: Melezhik et al. (2009)
10) Zhuya River West:
Geochemistry: Melezhik et al. (2009)
Section details: Melezhik et al. (2009)
11) Chara River:
Geochemistry: Pokrovsky et al. (2006); Melezhik et al. (2009)
Section details: Pokrovsky et al. (2006); Melezhik et al. (2009)
12) Borehole 1G
Geochemistry: Pokrovsky et al. (2006)
Section details: Pokrovsky et al. (2006)
Cis-Baikalian:
13) Goloustnaya River section:
Geochemistry: Kuznetsov et al. (2013)
Section details: Kuznetsov et al. (2013)
14) Kadil'naya Gorge section:
Geochemistry: Kuznetsov et al. (2013)
Section details: Kuznetsov et al. (2013)
15) Kurtun River section (Cryogenian to lower Ediacaran?):
Geochemistry: Khabarov & Ponomarchuk (2005)
Section details: Khabarov & Ponomarchuk (2005)
(III) Syugdzhera Saddle (Nepa-Botuoba to southern slope of Anabar Shield). Geochemical data and borehole information in Kochnev et al. (2018)
16) Ch-279, 367: Chayka-279 and 367
17) ZB-362-0: West Botuoba-362-0
18) S-706: Sokhsolokh-706
19) A-703: Aykhal-703
20) O-252-0: Onkhoydokh-252-0
21) SM-225-0: Middle Markha-225-0
22) M-223-0: Meyik-223-0
23) Sh-471: Sheya-471
24) Kh-322-0: Khannya-322-0
25) O-286-1: Onkuchakh-286-1
26) E-343-0: Eyik-343-0
(IV) Igarka-Norilsk Uplift
27) Sukharikha River section:
Geochemistry: Kouchinsky et al. (2007)
Section details: Datsenko et al. (1968); Luchinina et al. (1997); Rowland et al. (1998)
28) Kulyumbe River section (SPICE):
Geochemistry: Kouchinsky et al. (2008)
Section details: Kouchinsky et al. (2008)
Turukhansk Uplift:
29) Sukhaya Tunguska River section (geochemistry and section details: Bartley et al., 1998)
30) Nizhnyaya Tunguska River section (geochemistry and section details: Marusin et al., 2019)
(V) Anabar Shield
31) Kotuykan River sections:
Geochemistry: Knoll et al. (1995b); Kaufman et al. (1996)
Section details: Kaufman et al. (1996)
32) Kugda Creek:
Geochemistry: Kouchinsky et al. (2017)
Section details: Kouchinsky et al. (2017)
33) Ary-Mas-Yuryakh Creek:
Geochemistry: Kouchinsky et al. (2017)
Section details: Kouchinsky et al. (2017)
34) Bol'shaya Kuonamka and Malaya Kuonamka rivers:
Geochemistry: Kouchinsky et al. (2001, 2015, 2022)
Section details: Kouchinsky et al. (2001, 2015, 2017, 2022)
(VI) Olenek Uplift
35) Khorbusuonka River sections:
Geochemistry: Knoll et al. (1995); Cui et al. (2016); Kouchinsky et al. (2022)
Section details: Knoll et al. (1995); Nagovitsin et al. (2015); Rogov et al. (2015); Cui et al. (2016); Kouchinsky et al. (2022)
36) Olenek River section:
Geochemistry: Pelechaty et al. (1996a)
Section details: Pelechaty et al. (1996a)
37) Kytyngeder River section:
Geochemistry: Pelechaty et al. (1996a)
Section details: Pelechaty et al. (1996a,b)
38) Ulakhan-Uekhtekh River:
Geochemistry: Pelechaty et al. (1996a)
Section details: Pelechaty et al. (1996a,b)
39) Molodo River section:
Geochemistry: Shabanov et al. (2008)
Section details: Shabanov et al. (2008); Rozanov & Varlamov (2008)
(VII) Khara-Ulakh Mountains (lower reaches of Lena River)
40) Chekurovka Anticline, Chekurovka Village. Possible Shuram onset in upper Sietachan Fm.
Geochemistry: Khabarov & Izokh (2014)
Section details: Khabarov & Izokh (2014)
41) Chekurovka Anticline, Chekurovka Village:
Geochemistry: Pelechaty et al. (1996a); Khabarov & Izokh (2014)
Section details: Pelechaty et al. (1996a,b); Khabarov & Izokh (2014)
42) Bulkur Anticline, Ulakhan-Ald'yarkhay Creek mouth:
Geochemistry: Pelechaty et al. (1996a); Kouchinsky et al. (2022)
Section details: Pelechaty et al. (1996a,b); Kouchinsky et al. (2022)
(VIII) Lena River
43) Isit' section:
Geochemistry: Magaritz et al. (1991); Kirschvink et al. (1991); Parkhaev et al. (2016)
Section details: Kirschvink & Rozanov (1984); Rozanov & Varlamov (2008)
44) Zhurinsky Mys section:
Geochemistry: Kirschvink et al. (1991)
Section details: Kirschvink & Rozanov (1984); Rozanov et al. (2008); Rozanov & Varlamov (2008)
45) Achchagy-Kyyry-Taas section:
Geochemistry: Brasier et al. (1994b)
Section details: Brasier et al. (1994b); Rozanov & Varlamov (2008)
46) Achchagy-Tuoydakh section:
Geochemistry: Brasier et al. (1994b)
Section details: Brasier et al. (1994b)
47) Labaya section:
Geochemistry: Brasier et al. (1994b)
Section details: Brasier et al. (1994b); Rozanov & Varlamov (2008)
48) Titary sections:
Geochemistry: Brasier et al. (1994b)
Section details: Brasier et al. (1994b); Rozanov & Varlamov (2008)
49) Elanka section:
Geochemistry: Brasier et al. (1994b)
Section details: Brasier et al. (1994b); Rozanov & Varlamov (2008)
(IX) Uchur-Maya Plate
50) Dvortsy section:
Geochemistry: Magaritz et al. (1991); Kirschvink et al. (1991)
Section details: Rozanov & Varlamov (2008)
51) Ulakhan-Sulugur section:
Geochemistry: Kirschvink et al. (1991)
Section details: Rozanov & Varlamov (2008)
52) Selinde River:
Geochemistry: Kouchinsky et al. (2005)
Section details: Repina et al. (1988); Kouchinsky et al. (2005)
53) Yudoma-Maya Confluence section (YMC):
Geochemistry: This study
Section details: Vologdin & Maslov (1960); Khomentovsky (2008); Ivantsov (2017); Wood et al. (2017); This study
54) Nuuchchalakh Valley section (NV):
Geochemistry: This study
Section details: Semikhatov et al. (1970); Khomentovsky (2008); Zhuravlev et al. (2009); Wood et al. (2017); This study
(X) Yudoma-Maya Belt
55) Kyra-Yryga River Mouth section:
Geochemistry: Zhu et al. (2017)
Section details: Khomentovsky (2008); Zhu et al. (2017)
56) Suordakh River:
Geochemistry: Semikhatov et al. (2004)
Section details: Semikhatov et al. (2004)
57) Sakhara River:
Geochemistry: Semikhatov et al. (2004)
Section details: Semikhatov et al. (2004)
(XI) Okhotsk microcontinent

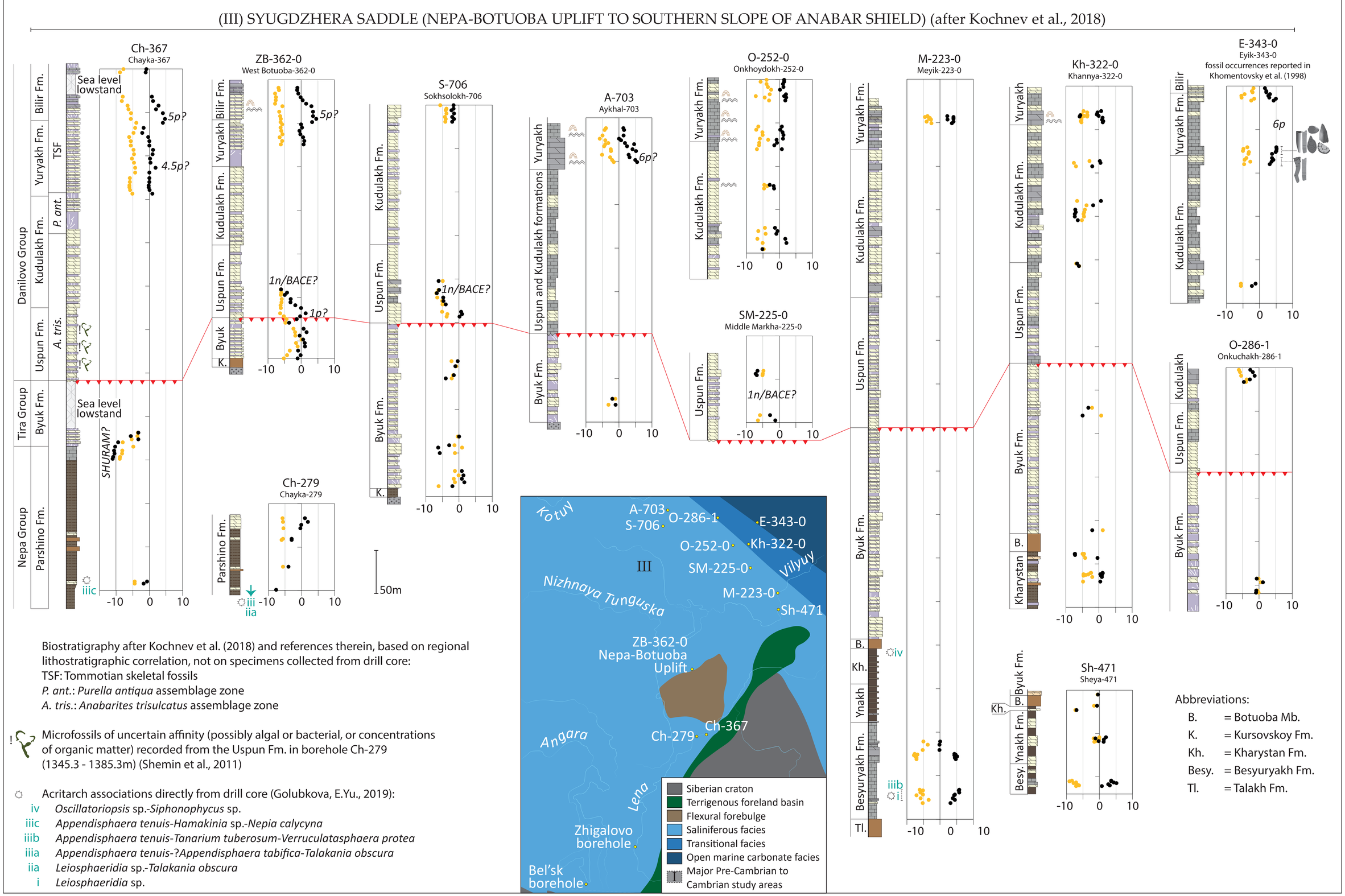
UNCONSTRUCTED SECTIONS IN RED

Figure S2. Note individual scale bars. See Fig. S5 for legend.



(I) YENISEI RANGE, IRKUTSK AMPHITHEATRE AND (II) BAIKAL & PATOM HIGHLANDS

Figure S3. All boreholes to scale. See Fig. S5 for legend.



Biostratigraphy after Kochnev et al. (2018) and references therein, based on regional lithostratigraphic correlation, not on specimens collected from drill core:
TSF: Tommotian skeletal fossils
P. ant.: *Purella antiqua* assemblage zone
A. tris.: *Anabarites trisulcatus* assemblage zone

! Microfossils of uncertain affinity (possibly algal or bacterial, or concentrations of organic matter) recorded from the Uspun Fm. in borehole Ch-279 (1345.3 - 1385.3m) (Shemin et al., 2011)

☼ Acritarch associations directly from drill core (Golubkova, E.Yu., 2019):

- iv *Oscillatoriopsis* sp.-*Siphonophycus* sp.
- iiic *Appendisphaera tenuis-Hamakinia* sp.-*Nepia calycyna*
- iiib *Appendisphaera tenuis-Tanarium tuberosum-Verruculatasphaera protea*
- iiia *Appendisphaera tenuis-?Appendisphaera tabifica-Talakania obscura*
- iia *Leiosphaeridia* sp.-*Talakania obscura*
- i *Leiosphaeridia* sp.

Abbreviations:

- B. = Botuoba Mb.
- K. = Kursovskoy Fm.
- Kh. = Kharystan Fm.
- Besy. = Besyuryakh Fm.
- Tl. = Talakh Fm.

Figure S4.
All sections to scale. See Fig. S5 for legend.

Lorem ipsum

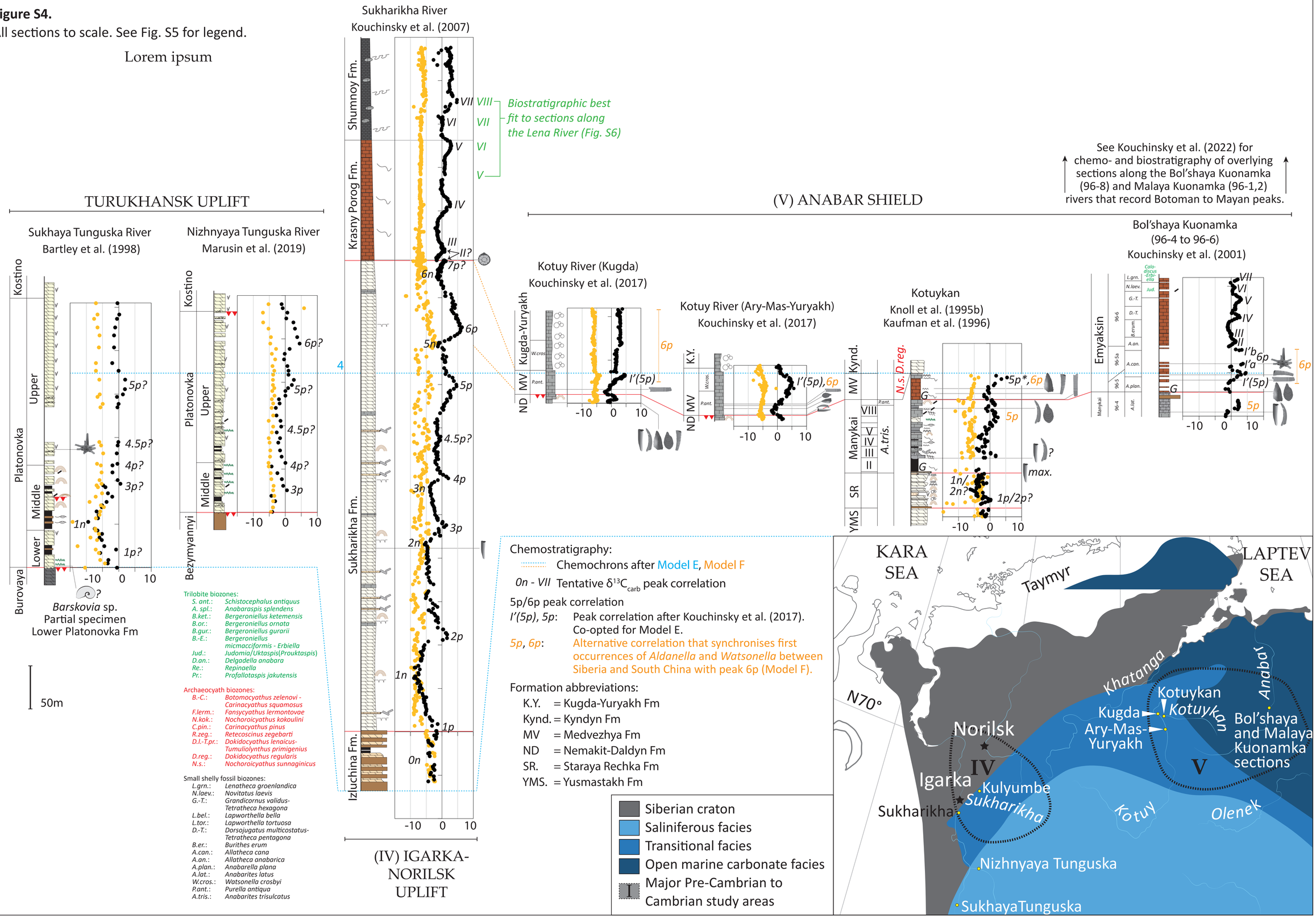
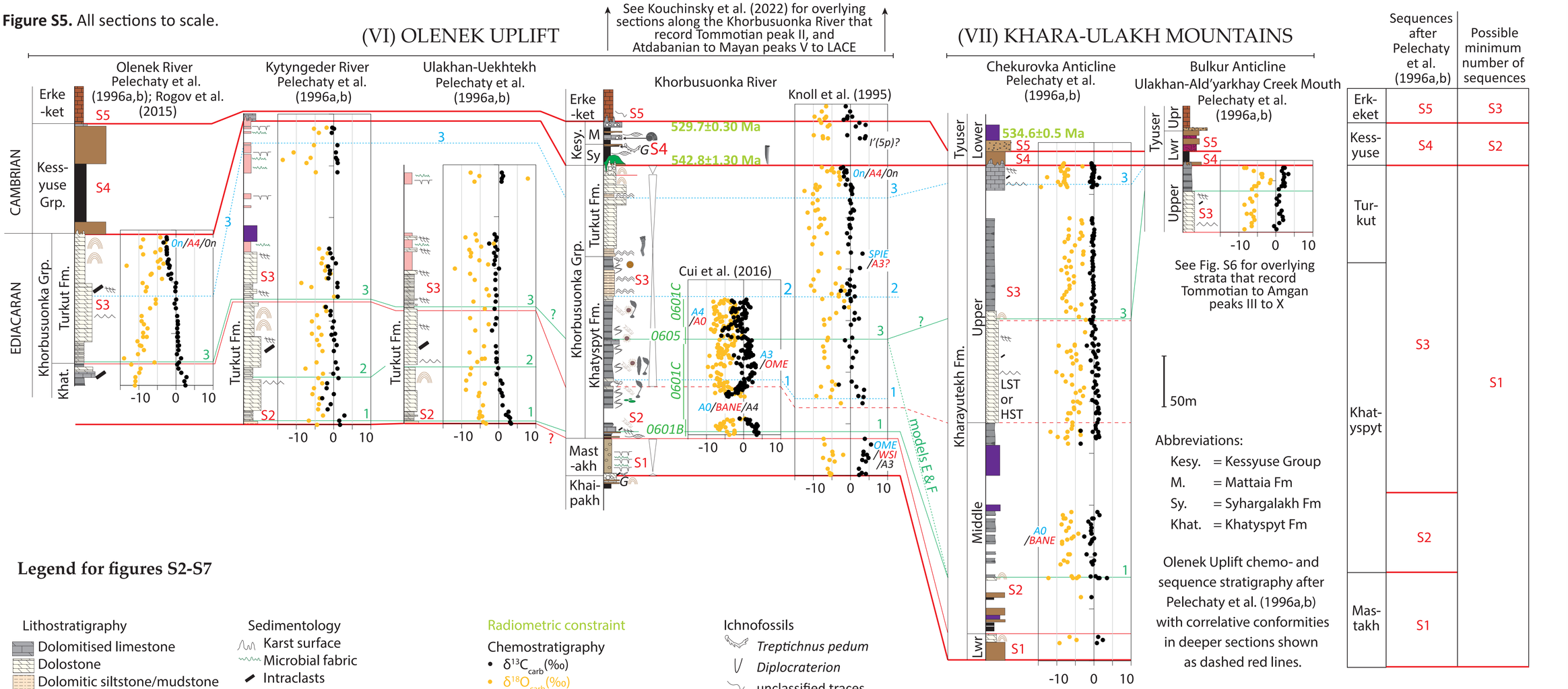


Figure S5. All sections to scale.



Legend for figures S2-S7

Lithostratigraphy
- Dolomitised limestone
- Dolostone
- Dolomitic siltstone/mudstone
- Mixed limey dolostone
- Dolomitic breccia
- Limestone (grainstone)
- Red argillaceous limestone
- Limestone (laminite)
- Conglomerate
- Sandstone
- Siltstone
- Shale
- Chert
- Dolerite
- Volcanic breccia
- Pillow basalt
- Gypsum/anhydrite
- Halite
- Native sulfur

Sedimentology
- Karst surface
- Microbial fabric
- Intraclasts
- Ooids
- Oncoids
- Symmetrical ripples
- Hummocky x-strat.
- Wavy bedding
- Planar cross-bedding
- Trough cross-bedding
- Desication cracks
- Slump structures
- Turbidites
- Flat pebble conglomerate

Sequence stratigraphy
- △ Transgressive
- ▽ Regressive
- S1 Major sequences (Pelechaty et al.)
- Sequence boundaries (Pelechaty et al.)
- Sequence boundaries (confident)
- 1 Flooding surfaces

Radiometric constraint

Chemostratigraphy
- • $\delta^{13}C_{carb}$ (‰)
- • $\delta^{18}O_{carb}$ (‰)

0.70865 $^{87}Sr/^{86}Sr$

1 Chemochron

WSI-0n $\delta^{13}C_{carb}$ peak correlation after models **C**, **D**, **E** and **F** (models C and D described in Bowyer et al., 2022)

$\delta^{13}C_{carb}$ excursion acronyms:
- ***0n***: Possible minor pre-BACE excursion (between *SPIE* and *1p*)
- ***SPIE***: Spitskop excursion
- ***A0-A4***: excursions recorded in the A0 to A4 members of the Ara Group, Oman.
- ***OME***: Omkyk Member excursion
- ***WSI***: White Sea Interval

Ichnofossils
- *Treptichnus pedum*
- *Diplocraterion*
- unclassified traces

Skeletal fossils
- Trilobites
- Archaeocyaths
- Brachiopods
- *Aldanella*
- Tommotiids
- Molluscs
- Chancelloriids
- Halkieriids
- Hyoliths
- Hyolithelminthes
- *Protohertzina*
- *Cambrotubulus*
- *Anabarites*
- *Cloudina*
- *Suvorovella*

Soft-bodied fossils
- Acritarchs
- *Aspidella*
- *Beltanelliformis*
- *Nenoxites*
- *Palaeopascichnus*
- *Hiemalora*
- *Vendotaenia*
- *Charnia masoni*
- *Khatyspytia grandis*

Microbial fossils
- Stromatolites
- Thrombolites

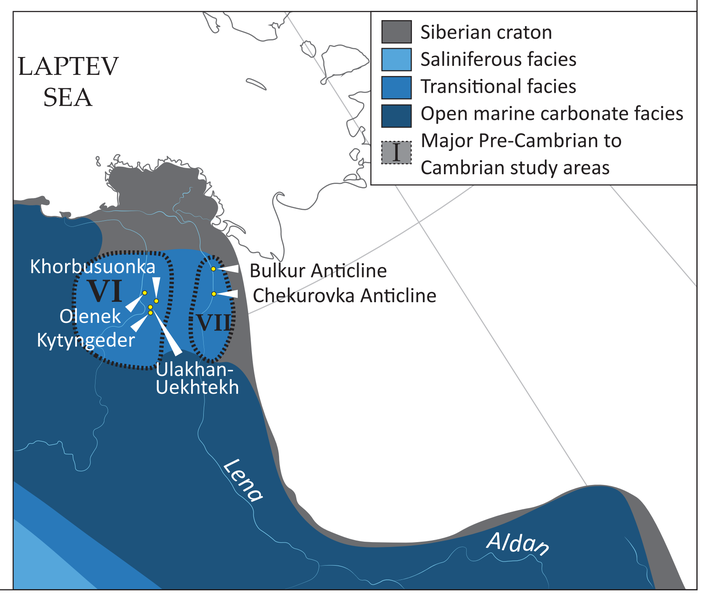
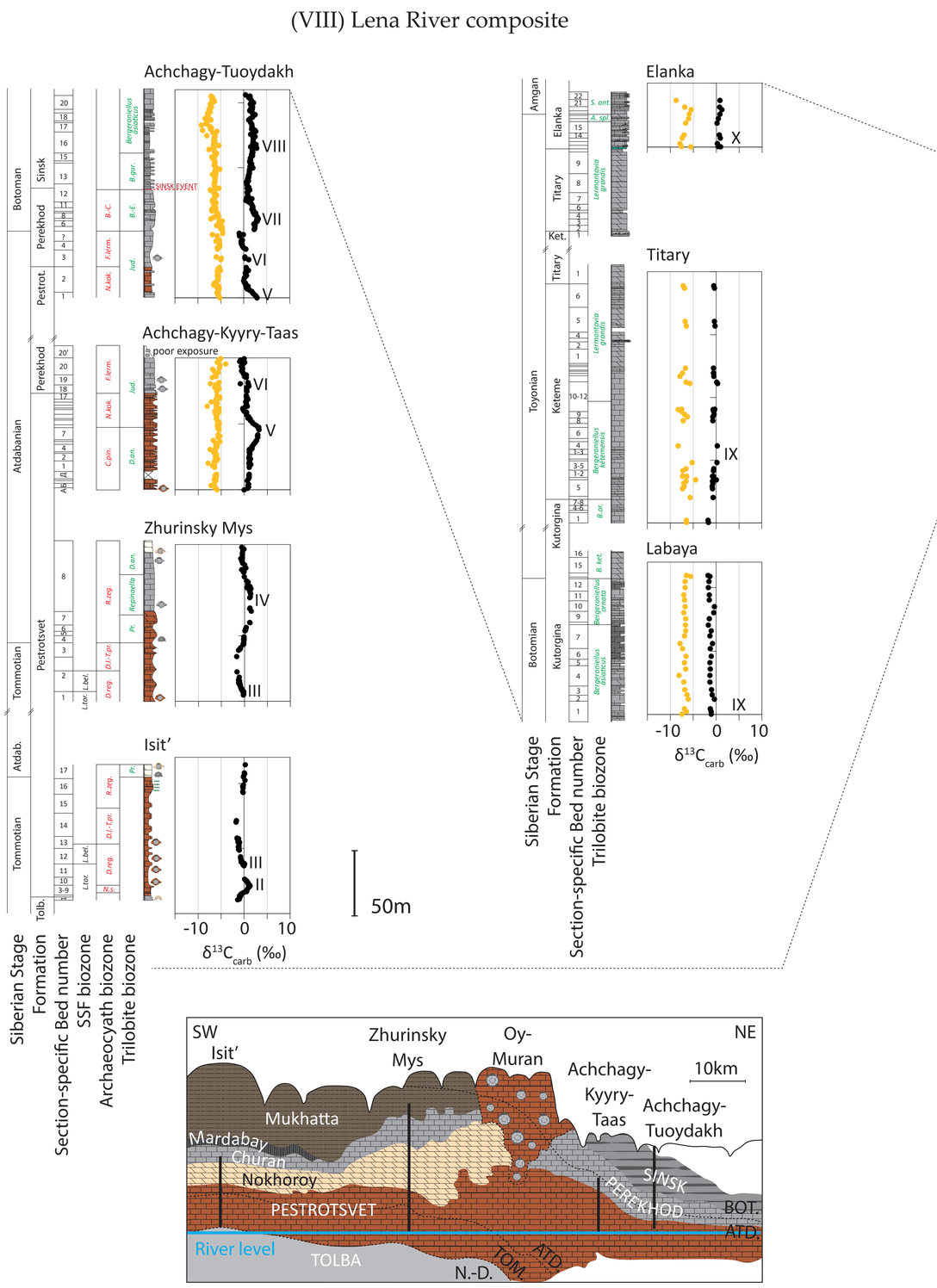
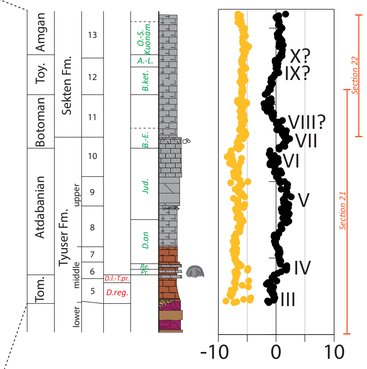


Figure S6. All sections to scale. See Fig. S5 for legend.





Trilobite biozones:
- *Kuonam.*: *Kuonamkites*
- *O.-S.*: *Ovatoryctocara - Schistocephalus*
- *S. ant.*: *Schistocephalus antiquus*
- *A.-L.*: *Anabaraspis splendens - Lermontovia grandis*
- *A. spl.*: *Anabaraspis splendens*
- *B.ket.*: *Bergeroniellus ketemensis*
- *B.or.*: *Bergeroniellus ornata*
- *B.gur.*: *Bergeroniellus gurarii*
- *B.-E.*: *Bergeroniellus micmacciformis - Erbiella*
- *Jud.*: *Judomia/Uktaspis(Prouktaspis)*
- *D.an.*: *Delgadella anabara*
- *Re.*: *Repinaella*
- *Pr.*: *Profallotaspis jakutensis*

Archaeocyath biozones:
- *B.-C.*: *Botomocyathus zelenovi - Carinacyathus squamosus*
- *F.lerm.*: *Fansycyathus lermontovae*
- *N.kok.*: *Nochoroicyathus kokoulini*
- *C.pin.*: *Carinacyathus pinus*
- *R.zeg.*: *Retecoscinus zegebarti*
- *D.l.-T.pr.*: *Dokidocyathus lenaicus-Tumuliolynthus primigenius*
- *D.reg.*: *Dokidocyathus regularis*
- *N.s.*: *Nochoroicyathus sunnaginicus*

Small shelly fossil biozones:
- *L.grn.*: *Lenatheca groenlandica*
- *N.laev.*: *Novitatus laevis*
- *G.T.*: *Grandicornus validus-Tetratheca hexagona*
- *L.bel.*: *Lapworthella bella*
- *L.tor.*: *Lapworthella tortuosa*
- *D.-T.*: *Dorsojugatus multicostatus-Tetratheca pentagona*
- *B.er.*: *Burithes erum*
- *A.can.*: *Allatheca cana*
- *A.an.*: *Allatheca anabarica*
- *A.plan.*: *Anabarella plana*
- *A.lat.*: *Anabarites latus*
- *W.cros.*: *Watsonella crosbyi*
- *P.ant.*: *Purella antiqua*
- *A.tris.*: *Anabarites trisulcatus*

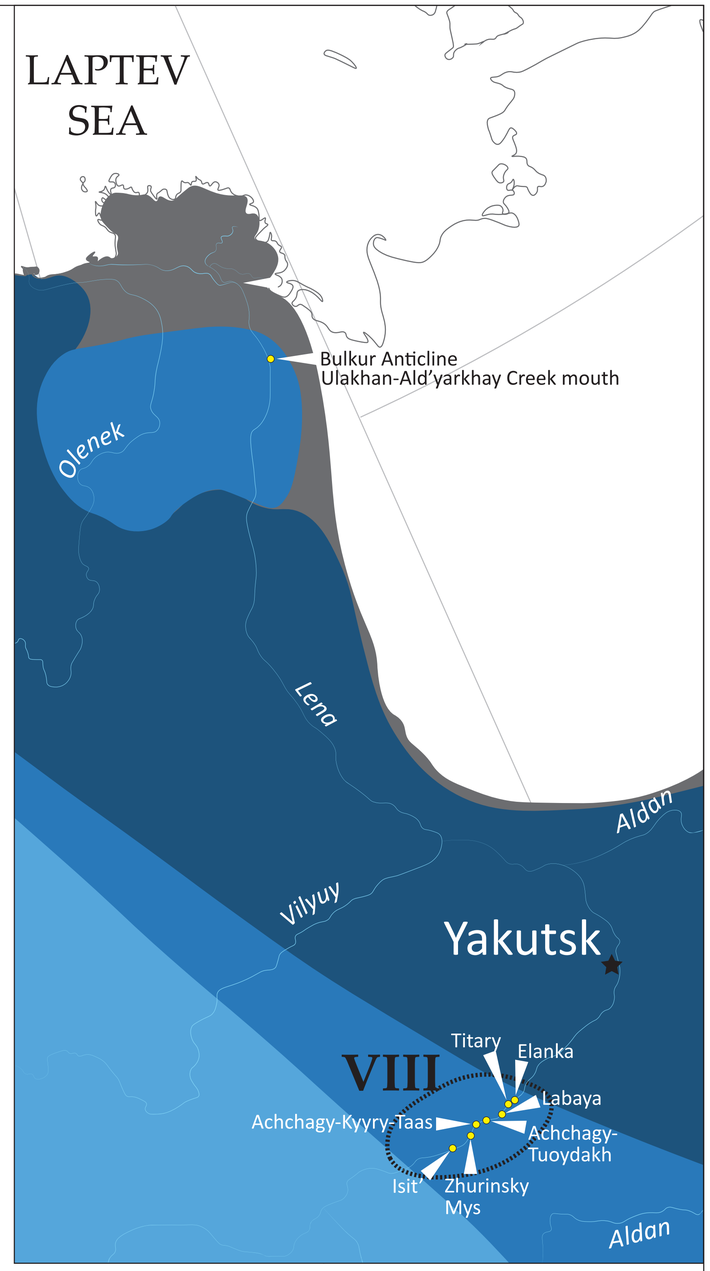


Figure S7. All sections to scale. See Fig. S5 for legend.

Palaeo sea level

Palaeobathymetry during deposition of the Ust'-Yudoma Formation

Palaeobathymetry in this region is uncertain. If Model E is preferred, then the Sakhara and Suordakh sections occupied a shallower hinterland than Model F, with greatly reduced terminal Ediacaran to Fortunian deposition (and/or greater erosion at the Yukanda/Sytyga and Sytyga/Pestrotsvet boundaries).

(IX) UCHUR-MAYA PLATE

Dvortsy
Magaritz et al. (1986, 1991);
Brasier et al. (1993)

Ulakhan-Sulugur
Magaritz (1989);
Brasier et al. (1993)

1) Gynym
2) Gonam
3) Berd -yakit
4) Chakdala
5) Mt. Konus
6) Nemn -ekey
7) Selinde
Repina et al. (1988)
Kouchinsky et al. (2005)
8) Dzhanda (comp.)
9) Aim
10) Maya

Formation
Bed Number
SSB biozone
Archaeocyath biozone
Trilobite biozone
Ust'-Yudoma
Pestrotsvet
Member 1
Member 2
Member 3
Mb 4
Aim Fm
Basement gneiss
D.len.
D.reg.
Purella antiqua
A. trisulcatus - P. onabarica
Pant.
Lapw. bel.
L.tor.
D.-T.
R.zeg.
Pr.
Re.
D.an.
Ol.-T.pr.

Base of Bed 8 ($\delta^{13}C$ = ~1.2‰) at Ulakhan-Sulugur defines base of Tommotian regional Stage immediately following peak $\delta^{13}C$ values that may correlate with peak 5p (Kouchinsky et al., 2017). See text for ongoing uncertainty.

Peak correlations for Dvortsy and Ulakhan-Sulugur the same for models E and F.

Tsypanda Fm

Yudoma-Maya Confluence
(this study)

prograding parasequence sets

Ust'-Kerbi Fm

NIGPAS
Edinburgh

carb.-cemented siltstone

Nuuchchalakh Valley
(this study)

Expanded Member 1/Members 1-4

SPIE/*5p*

Kyra-Ytyga River Mouth
Zhu et al. (2017)

Expanded Member 1-2/Members 1-4

FeS_2 framboids
Disseminated FeS_2

+375m

Inikanchan Fm
tectonic contact

Sakhara

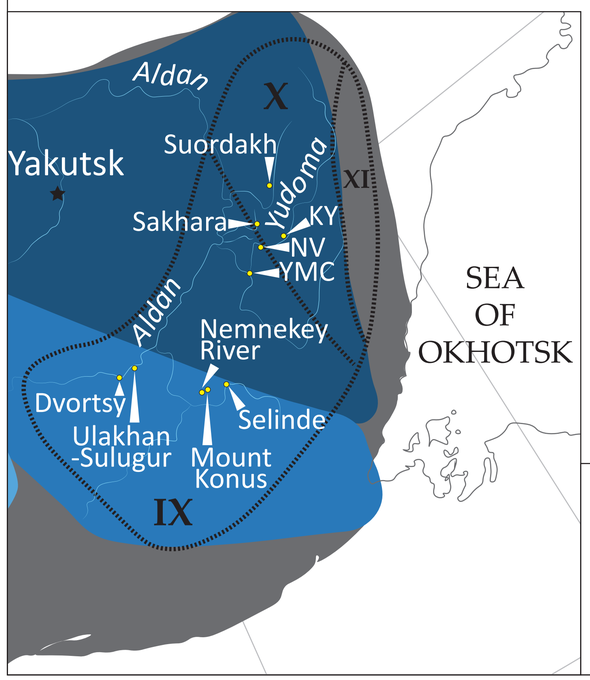
Suordakh

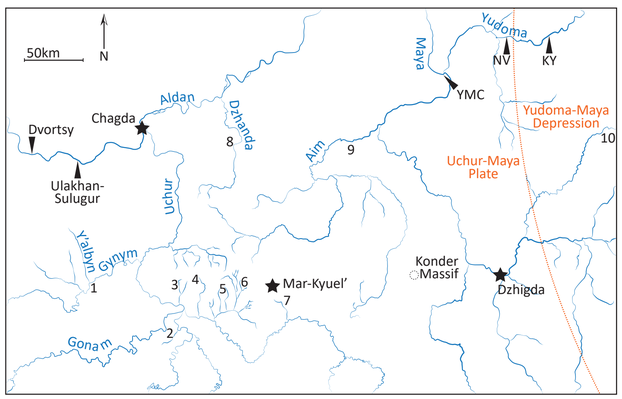
Sytyga
Yudoma (/Sardana) Group
Tokur
Maya
Yukanda
Yalan
Ui Group
Kandyk Formation
N = Nachara Subformation

Shuram-Wonoka excursion (after Semikhatov et al. (2004)/BACE?

Khufai peak /A3

$\delta^{13}C_{carb}$ (‰)
$\delta^{18}O_{carb}$ (‰)





Siberian craton
Saliniferous facies
Transitional facies
Open marine carbonate facies
Major Pre-Cambrian to Cambrian study areas

Trilobite biozones:
- *S. ant.:* *Schistocephalus antiquus*
- *A. spl.:* *Anabaraspis splendens*
- *B.ket.:* *Bergeroniellus ketemensis*
- *B.or.:* *Bergeroniellus ornata*
- *B.gur.:* *Bergeroniellus gurarii*
- *B.-E.:* *Bergeroniellus micmacciformis - Erbiella*
- *Jud.:* *Judomia/Uktaspis(Prouktaspis)*
- *D.an.:* *Delgadella anabara*
- *Re.:* *Repinaella*
- *Pr.:* *Profallotaspis jakutensis*

Archaeocyath biozones:
- *B.-C.:* *Botomocyathus zelenovi - Carinacyathus squamosus*
- *F.lerm.:* *Fansycyathus lermontovae*
- *N.kok.:* *Nochoroicyathus kokoulini*
- *C.pin.:* *Carinacyathus pinus*
- *R.zeg.:* *Retecoscinus zegebarti*
- *D.l.-T.pr.:* *Dokidocyathus lenaicus-Tumuliolynthus primigenius*
- *D.reg.:* *Dokidocyathus regularis*
- *N.s.:* *Nochoroicyathus sunnaginicus*

Small shelly fossil biozones:
- *L.grn.:* *Lenatheca groenlandica*
- *N.laev.:* *Novitatus laevis*
- *G.T.:* *Grandicornus validus-Tetratheca hexagona*
- *L.bel.:* *Lapworthella bella*
- *L.tor.:* *Lapworthella tortuosa*
- *D.-T.:* *Dorsojugatus multicostatus-Tetratheca pentagona*
- *B.er.:* *Burithes erum*
- *A.can.:* *Allatheca cana*
- *A.an.:* *Allatheca anabarica*
- *A.plan.:* *Anabarella plana*
- *A.lat.:* *Anabarites latus*
- *W.cros.:* *Watsonella crosbyi*
- *P.ant.:* *Purella antiqua*
- *A.tris.:* *Anabarites trisulcatus*

(X) YUDOMA-MAYA BELT (/DEPRESSION)

Member designation and lithostratigraphic correlation after
Khomentovsky (1985, 2008)
Khomentovsky & Karlova (1986, 1989, 1991, 1993);
Khomentovsky et al. (1983, 1990);
Val'kov (1983); Val'kov & Karlova (1984)

Possible pre-BACE chemo- and lithostratigraphic correlation for Ust'-Yudoma Fm along the Yudoma River (Model E).

Possible post-BACE chemo- and lithostratigraphic correlation for Ust'-Yudoma Fm along the Yudoma River (Model F).

Supplementary references for data and information presented in figures S1-S7

Astashkin, V.A., Pegel', T.V., Repina, L.N., Rozanov, A.Yu., Shabanov, Yu.Ya., Zhuravlev, A.Yu., Sukhov, S.S. & Sundukov, V.M. (1991) The Cambrian System on the Siberian Platform. Correlation chart and explanatory notes. International Union of Geological Sciences Publication, 27, pp. 1–133.

Bartley, J.K., Pope, M., Knoll, A.H., Semikhatov, M.A. & Petrov, P.Yu. (1998) A Vendian-Cambrian boundary succession from the northwestern margin of the Siberian Platform: stratigraphy, palaeontology, chemostratigraphy and correlation. Geological Magazine, 135, pp. 473–494.

Brasier, M.D., Khomentovsky, V.V. & Corfield, R.M. (1993) Stable isotopic calibration of the earliest skeletal fossil assemblages in eastern Siberia (Precambrian-Cambrian boundary). Terra Nova, 5, pp. 225–232.

Brasier, M.D., Rozanov, A.Yu., Zhuravlev, A.Yu., Corfield, R.M. & Derry, L.A. (1994) A carbon isotope reference scale for the Lower Cambrian succession in Siberia: report of IGCP Project 303. Geological Magazine, 131, pp. 767–783.

Bowyer, F.T., Zhuravlev, A.Yu., Wood, R., Shields, G.A., Zhou, Y., Curtis, A., Poulton, S.W., Condon, D.J., Yang, C. & Zhu, M. (2022) Calibrating the temporal and spatial dynamics of the Ediacaran-Cambrian radiation of animals. Earth-Science Reviews, 225, pp. 103913.

Butakov, E.P., Karpinskii, R.B., & Ustalov, V.V. (1975) Vendian of the Teya-Chapa Region. Geol. Geofiz., 8, pp. 67–77.

Chumakov, N.M., Semikhatov, M.A. & Sergeev, V.N. (2013) Vendian Reference Section of Southern Middle Siberia. Stratigraphy and Geological Correlation, 21, pp. 359–382.

Cui, H., Grazhdankin, D.V., Xiao, S., Peek, S., Rogov, V.I., Bykova, N.V., Sievers, N.E., Liu, X.M. & Kaufman, A.J. (2016) Redox-dependent distribution of early macro-organisms: Evidence from the terminal Ediacaran Khatyspyt Formation in Arctic Siberia. Palaeogeography, Palaeoclimatology, Palaeoecology, 461, pp. 122–139.

Datsenko, V.A., Zhuravleva, I.T., Lazarenko, N.P., Popov, Yu.N., & Chernysheva, N.E. (1968) Biostratigraphy and fauna of the Cambrian deposits of the northwestern Siberian Platform. Nauchno-Issledovatel'skiy Institut Geologii Arktiki, Trudy 155, pp. 1–213 [in Russian].

Golubkova, E.Yu. (2019) Organic-walled microfossils in the Vendian stratigraphy of the Southeast of the Siberian Platform. Unpublished Ph.D. Thesis, Institute of Geology and Geochronology of Precambrian, Russian Academy of Sciences, Saint Petersburg, 207 pp. [in Russian]

Karlova, G.A. (1987) First finds of a skeletal fauna in the Turkut Formation of the Olenek Uplift. Doklady Akademii Nauk SSSR, 292, pp. 204–205 [in Russian].

Karlova, G.A. & Vodanyuk, S.A. (1985) New data on transitional Cambrian strata in the r. Khorbusuonka basin (Olenek Uplift), in Khomentovsky, V.V., ed., Stratigraphy of the Late Precambrian and Early Palaeozoic of Siberia, Vendian and Riphean. Novosibirsk, Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, pp. 3–13.

Kaufman, A.J., Knoll, A.H., Semikhatov, M.A., Grotzinger, J.P., Jacobsen, S.B. & Adams, W. (1996) Integrated chronostratigraphy of Proterozoic-Cambrian boundary beds in the western Anabar region, northern Siberia. Geological Magazine, 133, pp. 509–533.

Khabarov, E.M. & Izokh, O.P. (2014) Sedimentology and isotope geochemistry of Riphean carbonates in the Kharaulakh Range of northern East Siberia. Russian Geology and Geophysics, 55, pp. 629–648.

Khabarov, E.M. & Ponomarchuk, V.A. (2005) Carbon isotopes in the upper Riphean deposits of the Baikal Group in western Cisbaikalia: stratigraphic implications. Russian Geology and Geophysics, 46, pp. 1019–1037.

Khomentovsky, V.V. (1985) The Vendian of the Siberian Platform. In Sokolov B.S., Fedonkin, M.A., eds. The Vendian System. Historical-Geological and Palaeontological Grounds, Vol. 2: Stratigraphy, pp. 83–161. Nauka, Moscow (English translation: The Vendian System, vol. 2: Regional Geology. Springer, Berlin; Heidelberg, 1990).

Khomentovsky, V.V. (2008) The Yudomian of Siberia, Vendian and Ediacaran Systems of the International Stratigraphic Scale. Stratigraphy and Geological Correlation, 16, pp. 581–598.

Khomentovsky, V.V. & Karlova, G.A. (1986) On the lower boundary of the Pestrotsvet Formation in the r. Aldan basin, in Khomentovsky, V.V., ed., Late Precambrian and Early Palaeozoic of Siberia, Siberian Platform and the Outer Belt of the Altay-Sayan Foldbelt: Novosibirsk, Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, pp. 3–22 [in Russian].

Khomentovsky, V.V. & Karlova, G.A. (1989) Vendian-Cambrian strata of the Dzhanda River and their analogies in the key sections of eastern Siberia. In Khomentovsky, V.V., Sovetov, Yu.K., eds. Late Precambrian and Early Palaeozoic of Siberia. Actual Problems of the Stratigraphy, p. 23–61. Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, Novosibirsk [in Russian].

Khomentovsky, V.V. & Karlova, G.A. (1991) New data on the correlation of Vendian-Cambrian strata in the eastern and transitional facies regions of southern Yakutia. In Khomentovsky, V.V., ed. Late Precambrian and Early Palaeozoic of Siberia. Siberian Platform and Its Borderland, p. 3–44. United Institute of Geology, Geophysics and Mineralogy, Siberian Branch, USSR Academy of Sciences, Novosibirsk [in Russian].

Khomentovsky, V.V. & Karlova, G.A. (1993) Biostratigraphy of the Vendian-Cambrian beds and the lower Cambrian boundary in Siberia. Geological Magazine, 130(1), pp. 29–45.

Khomentovsky, V.V. & Karlova, G.A. (2002) The boundary between Nemakit-Daldynian and Tommotian stages (Vendian-Cambrian Systems) of Siberia. Stratigraphy and Geological Correlation, 10, pp. 217–238.

Khomentovsky, V.V., Val'kov, A.K., Karlova, G.A. & Nuzhnov, S.V. (1983) Key section of transitional Precambrian-Cambrian strata in the lower Gonam River. In Khomentovsky, V.V., ed. Late Precambrian and Early Palaeozoic of Siberia. Vendian Strata, p. 24–36. Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, Novosibirsk [in Russian].

Khomentovsky, V.V., Val'kov, A.K., & Karlova, G.A. (1990) New data on the biostratigraphy of transitional Vendian-Cambrian strata in the middle Aldan River basin. In Khomentovsky, V.V., Gibsher, A.S., eds. Late Precambrian and Early Palaeozoic of Siberia. Problems of the Regional Stratigraphy, p. 3–57. Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, Novosibirsk [in Russian].

Khomentovsky, V.V., Fedorov, A.B. & Karlova, G.A. (1998) The Lower Cambrian boundary in the inner areas of the northern Siberian Platform. Stratigraphy and Geological Correlation, 6(1), pp. 3–11.

Khomentovsky, V.V., Postnikov, A.A., Karlova, G.A., Kochnev, B.B., Yakshin, M.S. & Ponomarchuk, V.A. (2004) The Vendian of the Baikal-Patom Upland, Siberia. Russian Geology and Geophysics, 45, pp. 465–484.

Kirschvink, J.L. & Rozanov, A.Yu. (1984) Magnetostratigraphy of lower Cambrian strata from the Siberian Platform: a palaeomagnetic pole and a preliminary polarity time-scale. Geological Magazine, 121, pp. 189–203.

Kirschvink, J.L., Magaritz, M., Ripperdan, R.L., Zhuravlev, A.Yu. & Rozanov, A.Yu. (1991) The Precambrian/Cambrian Boundary: Magnetostratigraphy and Carbon Isotopes Resolve Correlation Problems Between Siberia, Morocco, and South China. GSA Today, 1, pp. 69–71, 87, 91.

Knoll, A.H., Grotzinger, J.P., Kaufman, A.J. & Kolosov, P. (1995) Integrated approaches to terminal Proterozoic stratigraphy: an example from the Olenek Uplift, northeastern Siberia. Precambrian Research, 73, pp. 251–270.

Kochnev, B.B., Pokrovsky, B.G., Kuznetsov, A.B. & Marusin, V.V. (2018) C and Sr isotope chemostratigraphy of Vendian-Lower Cambrian carbonate sequences in the central Siberian Platform. Russian Geology and Geophysics, 59, pp. 585–605.

Korshunov, V.I., Repina, L.N. & Sysoev, V.A. (1969) To the structure of the Pestrotsvet Formation on the East of the Aldan Anteclise. Geologiya i Geofizika, 1969(10), pp. 18–21 [in Russian].

Kouchinsky, A., Bengtson, S., Missarzhevsky, V.V., Pelechaty, S., Torssander, P. & Val'kov, A.K. (2001) Carbon isotope stratigraphy and the problem of a pre-Tommotian Stage in Siberia. Geological Magazine, 138, pp. 387–396.

Kouchinsky, A., Bengtson, S., Pavlov, V., Runnegar, B., Val'kov, A. & Young, E. (2005) Pre-Tommotian age of the lower Pestrotsvet Formation in the Selinde section on the Siberian platform: carbon isotopic evidence. Geological Magazine, 142, pp. 319–325.

Kouchinsky, A., Bengtson, S., Pavlov, V., Runnegar, B., Torssander, P., Young, E. & Ziegler, K. (2007) Carbon isotope stratigraphy of the Precambrian-Cambrian Sukharikha River section, northwestern Siberian platform. Geological Magazine, 144, pp. 609–618.

Kouchinsky, A., Bengtson, S., Landing, E., Steiner, M., Vendrasco, M. & Ziegler, K. (2017) Terreneuvian stratigraphy and faunas from the Anabar Uplift, Siberia. Acta Palaeontologica Polonica, 62, pp. 311–440.

Kouchinsky, A., Alexander, R., Bengtson, S., Bowyer, F., Clausen, S., Holmer, L.E., Kolesnikov, K.A., Korovnikov, I.V., Pavlov, V., Skovsted, C.B., Ushatinskaya, G., Wood, R., & Zhuravlev, A.Y. (2022) Early-middle Cambrian stratigraphy and faunas from northern Siberia. Acta Palaeontologica Polonica, 67(2), 341–464.

Landing, E. & Kouchinsky, A. (2016) Correlation of the Cambrian Evolutionary Radiation: geochronology, evolutionary stasis of earliest Cambrian (Terreneuvian) small shelly fossil (SSF) taxa, and chronostratigraphic significance. Geological Magazine, 153, 750–756.

Luchinina, V.A., Korovnikov, I.V., Sipin, D.P., & Fedoseev , A.V. (1997) Upper Vendian–Lower Cambrian biostratigraphy of the Sukharikha River section (Siberian Platform). Russian Geology and Geophysics, v. 38, pp. 1385–1397.

Magaritz, M. (1989) ^{13}C minima follow extinction events: A clue to faunal radiation. Geology, 17, pp. 337–340.

Magaritz, M., Holser, W.T. & Kirschvink, J.L. (1986) Carbon-isotope events across the Precambrian/Cambrian boundary on the Siberian Platform. Nature, 320, pp. 258–259.

Magaritz, M., Kirschvink, J.L., Latham, A.J., Zhuravlev, A.Yu. & Rozanov, A.Yu. (1991) Precambrian/Cambrian boundary problem: Carbon isotope correlations for Vendian and Tommotian time between Siberia and Morocco. Geology, 19, pp. 847–850.

Marusin, V.V., Kochnev, B.B., Karlova, G.A., & Nagovitsin, K.E. (2019) Resolving Terreneuvian stratigraphy in subtidal-intertidal carbonates: palaeontological and chemostratigraphical evidence from the Turukhansk Uplift, Siberian Platform. Lethaia, 52, pp. 464–485.

Marusin, V.V., Kolesnikova, A.A., Kochnev, B.B., Kuznetsov, N.B., Pokrovsky, B.G., Romanyuk, T.V., Karlova, G.A., Rud'ko, S.V., Shatsillo, A.V., Dubenskiy, A.S., Sheshukov, V.S., & Lyapunov, S.M. (2021) Detrital zircon age and biostratigraphic and chemostratigraphic constraints on the Ediacaran-Cambrian transitional interval in the Irkutsk Cis-Sayans Uplift, southwestern Siberian Platform. Geological Magazine, 158, pp. 1156–1172.

Mel'nikov, N.V., Yakshin, M.S., Shishkin, B.B., Efimov, A.O., Karlova, G.A., Kilina, L.I., Konstantinova, L.N., Kochnev, B.B., Kraevsky, B G., Mel'nikov, P.N., Nagovitsin, K.E., Postnikov, A.A., Rybkova, L.V., Terleev, A.A. & Khabarov, E.M. (2005) Stratigraphy of the Oil-Gas-Bearing Basins of Siberia. Riphean and Vendian of the Siberian Platform and Its Folded Border. Novosibirsk, Academic Publishing House <Geo>, 428 p. [in Russian].

Meshkova, N.P. (1974) Lower Cambrian hyoliths of the Siberian Platform. Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, Trudy, 97, pp. 1–111 [in Russian].

Parkhaev, P.Yu., Skorlotova, N.A. & Shuvalova, Yu.V. (2016) New carbon isotope data on the Precambrian-Cambrian interval of the Tommotian stage hypostratotype- Isit' Section (Lena River, Siberian Platform). AGI Phanerozoic Earth History, Stratigraphy and the Geologic Time Scale T47.15 - Early Paleozoic World. Conference paper number: 4100.

Pelechaty, S.M. (1998) Integrated chronostratigraphy of the Vendian System of Siberia: implications for a global stratigraphy. Journal of the Geological Society, London, 155, pp. 957–973.

Pelechaty, S.M., Kaufman, A.J. & Grotzinger, J.P. (1996a) Evaluation of $\delta^{13}C$ chemostratigraphy for intrabasinal correlation: Vendian strata of northeast Siberia. GSA Bulletin, 108, pp. 992–1003.

Pelechaty, S.M., Grotzinger, J.P., Kashirtsev, V.A. & Zhernovsky, V.P. (1996b). Chemostratigraphic and Sequence Stratigraphic Constraints on Vendian-Cambrian Basin Dynamics, Northeast Siberian Craton. The Journal of Geology, 104, pp. 543–563.

Pokrovsky, B.G., Melezhik, V.A. & Bujakaite, M.I. (2006) Carbon, Oxygen, Strontium, and Sulfur Isotopic Compositions in Late Precambrian Rocks of the Patom Complex, Central Siberia: Communication 1. Results, Isotope Stratigraphy, and Dating Problems. Lithology and Mineral Resources, 41, pp. 450–474.

Pokrovsky, B.G., Bujakaite, M.I. & Kokin, O.V. (2012) Geochemistry of C, O, and Sr isotopes and chemostratigraphy of Neoproterozoic rocks in the northern Yenisei Ridge. Lithology and Mineral Resources, 47, pp. 177–199.

Pokrovsky, B.G., Bujakaite, M.I., Petrov, O.L. & Kolesnikova, A.A. (2020) The C, O, and Sr isotope chemostratigraphy of the Vendian (Ediacaran)–Cambrian transition, Olekma River, western slope of the Aldan Shield. Stratigraphy and Geological Correlation, 28, pp. 479–492.

Repina, L.N., Borodaevskaya, Z.V. & Ermak, V.V. (1988) Key section of the r. Selinde (south-eastern margin of the Aldan Shield), in Zhuravleva, I.T., and Repina, L.N., eds., Cambrian of Siberia and Middle Asia. Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, Trudy, 720, pp. 3–31 [in Russian].

Rowland, S.M., Luchinina, V.A., Korovnikov, I.V., Sipin, D.P., Tarletskov, A. & Fedoseev, A.V. (1998) Biostratigraphy of the Vendian-Cambrian Sukharikha River section, northwestern Siberian Platform. Canadian Journal of Earth Sciences, 35, pp. 339–352.

Rozanov, A.Yu. & Sokolov, B.S., eds., (1984) Early Cambrian Stage Subdivision, Stratigraphy. Moscow, Nauka, 184 p. [in Russian].

Rozanov, A.Yu. & Varlamov, A.I. (2008) The Cambrian System of the Siberian Platform. XIII International Field Conference of the Cambrian Stage Subdivision Working Group, Yakutia, Russia, July 20 - August 1, 2008, Field Guide parts 1 & 2.

Rozanov, A.Yu., Missarzhevsky, V.V., Volkova, N.A., Voronova , L.C., Krylov, I.N., Keller, B.M., Korolyuk, I.K., Lendzion, K., Michniak, R., Pykhova, N.G. & Sidorov, A.D. (1969) The Tommotian Stage and the Cambrian lower boundary problem: New Delhi, Amerind Publishing Co. (for 1981), 359 p.

Rozanov, A.Yu., Khomentovsky, V.V., Shabanov, Y.Y., Karlova, G.A., Varlamov, A.I., Luchinina, V.A., Pegel', T.V., Demidenko, Y.E., Parkhaev, P.Y., Korovnikov, I.V. & Skorlotova, N.A. (2008) To the problem of stage subdivision of the Lower Cambrian. Stratigraphy and Geological Correlation, 16, pp. 1–19.

Rud'ko, S.V., Petrov, P.Yu., Kuznetsov, A.B., Shatsillo, A.V. & Petrov, O.L. (2017) Refined δ13C trend of the Dal'nyaya Taiga Series of the Ura Uplift (Vendian, Southern Part of Middle Siberia). Doklady Earth Sciences, 477, pp. 1449–1453

Rud'ko, S.V., Kuznetsov, A.B. & Petrov, P.Yu. (2020) Strontium isotope composition in limestones of the Dal'nyaya Taiga Group in the Patom Basin: Vendian reference section of Siberia. Lithology and Mineral Resources, 55, pp. 206–217.

Rud'ko, S.V., Kuznetsov, A.B., Petrov, P.Yu., Sitkina, D.R. & Kaurova, O.K. (2021) Pb-Pb dating of the Dal'nyaya Taiga Group in the Ura uplift of southern Siberia: Implications for correlation of C-isotopic and biotic events in the Ediacaran. Precambrian Research, 362, 106285.

Sarsembaev, Z. A. & Marusin, V. V. (2019) Big guns of the Cambrian Explosion: macroskeletal benthic assemblage in the lower Cambrian Stage 2 of the Olenek Uplift, Arctic Siberia. Estudios Geológicos, 75, e113.

Savitsky, V.E., Zhuravleva, I.T., Kir'yanov, V.V., Luchinina, V.A., Meshkova, N.P. & Shishkin, B.B. (1980) Nemakit-Daldynian facies stratotype of the Precambrian and Cambrian boundary in Siberia, in Sidorenko, A.V., ed., International Geological Congress, XXVI Session, Reports of Soviet Geologists, Precambrian: Moscow, Nauka, p. 164–170.

Semikhatov, M.A., Komar, V.A. & Serebryakov, S.N. (1970) The Yudoma Complex in the stratotype area. Geologicheskiy Institut, Akademiya Nauk SSSR, Trudy, 210, pp. 1–207 [in Russian].

Semikhatov, M.A., Kuznetsov, A.B., Podkovyrov, V.N., Bartley, J.K. & Davydov, Yu.V. (2004) The Yudoma Group of Stratotype Area: C-isotope Chemostratigraphic Correlations and Yudomian-Vendian Relation. Stratigraphy and Geological Correlation, 12, pp. 435–459.

Shabanov, Y.Y., Korovnikov, I.V., Pereladov, V.S., Pak, K.L. & Fefelov, A.F. (2008) Kuonamka Formation on Molodo River – a candidate for global stratotype of the lower boundary of the Middle Cambrian (East of the Siberian Platform). Cambrian sections of the Siberian Platform – candidates for stratotypes of subdivisions of the International Stratigraphical scheme (Stratigraphy and Palaeontology), 59–70. Materials for 13th International Field Conference of the Cambrian Stage Subdivision Working Group. Novosibirsk, SB RAN.

Shemin, G.G., Terleev, A.A., Postnikov, A.A., Tokarev, D.A., & Kochnev, B.B. (2011) Features of the Vendian Lower Cambrian stratigraphy of the Siberian Platform stripped in the Chaika parametric borehole 279. Geologiya i Mineralno-Syr'evye Resursy Sibiri, 4, pp. 21–29.

Sochava, A.V., Podkovyrov, V.N. & Vinogradov, D.P. (1996) Variations of carbon and oxygen isotope compositions in Vendian-Lower Cambrian carbonate rocks of the Ura Anticlinorium (southern Siberian platform). Lithology and Mineral Resources, 31, pp.248–257.

Sovetov, J.K. (2002) Vendian foreland basin of the Siberian cratonic margin: Paleopangean accretionary phases. Russian Journal of Earth Sciences, 4(5), pp. 363–387.

Sysoev, V.A. (1972) Lower Cambrian Biostratigraphy and Orthothecimorph Hyoliths of the Siberian Platform. Moscow, Nauka, 152 p. [in Russian].

Val'kov, A.K. (1975) Cambrian Biostratigraphy and Hyoliths of the North-East of the Siberian Platform. Moscow, Nauka, 140 p. [in Russian].

Val'kov, A.K. (1982) Lower Cambrian Biostratigraphy of the East of the Siberian Platform. Moscow, Nauka, 92 p. [in Russian].

Val'kov, A.K. (1983) Distribution of the oldest skeletal organisms and the correlation of the Cambrian lower boundary in the south-eastern part of the Siberian Platform, in Khomentovsky, V.V., ed., Late Precambrian and Early Palaeozoic of Siberia, Vendian Strata. Novosibirsk, Institut Geologii i Geofiziki, Sibirskoe Otdelenie, Akademiya Nauk SSSR, pp. 37–48. [in Russian].

Val'kov, A.K. & Karlova, G.A. (1984) Fauna from transitional Vendian-Cambrian strata in the lower Gonam River. In Khomentovsky, V.V., ed. Stratigraphy of the Late Precambrian and Early Palaeozoic. Middle Siberia, p. 12–41. Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences, Novosibirsk [in Russian].

Varlamov, A.I. , Rozanov, A.Yu., Khomentovsky, V.V. , Shabanov, Yu.Ya. , Abaimova, G.P. , Demidenko, Yu.E. , Karlova, G.A. , Korovnikov, I.V. , Luchinina, V.A. , Malakhovskaya, Ya.E. , Parkhaev, P.Yu. , Pegel, T.V., Skorlotova, N.A., Sundukov, V.M., Sukhov, S.S., Fedorov, A.B. & Kipriyanova, L.D. (2008) The Cambrian System of the Siberian Platform. Part 1: The Aldan-Lena Region. Moscow, PIN. 300 pp.

Vinogradov, V.I., Belenitskaya, G.A., Bujakaite, M.I., Kuleshov, V.N., Minaeva, M.A. & Pokrovskii, B.G. (2006a) Isotopic signatures of deposition and transformation of Lower Cambrian saliferous rocks in the Irkutsk Amphitheater: Communication 1. Sulfur isotopic composition. Lithology and Mineral Resources, 41, pp. 85–97.

Vinogradov, V.I., Belenitskaya, G.A., Bujakaite, M.I., Kuleshov, V.N., Minaeva, M.A. & Pokrovskii, B.G. (2006b) Isotopic signatures of deposition and transformation of Lower Cambrian saliferous rocks in the Irkutsk Amphitheater: Communication 3. Carbon and oxygen isotopic compositions in carbonates. Lithology and Mineral Resources, 41, pp. 271–279.

Vishnevskaya, I.A., Letnikova, E.F., Vetrova, N.I., Kochnev, B.B. & Dil, S.I (2017) Chemostratigraphy and detrital zircon geochronology of the Neoproterozoic Khorbusuonka Group, Olenek Uplift, Northeastern Siberian platform. Gondwana Research, 51, pp. 255–271.

Vologdin, A.G. & Maslov, A.B. (1960) On a new group of fossil organisms from the lower Yudoma Formation of the Siberian Platform. Doklady Akademii Nauk SSSR, 134, pp. 691–693 [in Russian].

Voronova, L.G., Grigor'eva, N.V., Zhegallo, E.A., Missarzhevsky, V.V. & Sysoev, V.A. (1983) Age of the "*Oelandiella*" *korobkovi–Anabarella plana* strata on the Siberian Platform. Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1983(12), pp. 80–84 [in Russian].

Wood, R.A., Zhuravlev, A.Yu., Sukhov, S.S., Zhu, M. & Zhao, F. (2017) Demise of Ediacaran dolomitic seas marks widespread biomineralization on the Siberian Platform. Geology, 45, pp. 27–30.

Zhu, M., Zhuravlev, A.Yu., Wood, R.A., Zhao, F. & Sukhov, S.S. (2017) A deep root for the Cambrian explosion: Implications of new bio- and chemostratigraphy from the Siberian Platform. Geology, 45, pp. 459–462.

Zhuravlev, A.Yu., Gámez Vintaned, J.A. & Ivantsov, A.Yu. (2009) First finds of problematic Ediacaran fossil *Gaojiashania* in Siberia and its origin. Geological Magazine, 146, pp. 775–780.