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**Late Ediacaran large river deposits at the Siberian Platform south-west: sedimentology and provenance in relation to paleocontinent connections**

Sovetov J.K.<sup>1,2</sup>, Hofmann M.<sup>3</sup>, Kazak A. K.<sup>2</sup>, Solovetskaya L.V.<sup>1,2</sup>

<sup>1</sup>Trofimuk Institute of Petroleum Geology and Geophysics SB RAS, Laboratory geodynamics and paleomagnetism, Novosibirsk, Koptyug Pr.3, 630090, Russia, [sovetoxyk@ipgg.sbras.ru](mailto:sovetoxyk@ipgg.sbras.ru)

<sup>2</sup>Novosibirsk National Research State University (NGU), Department of Geology and Geophysics. Novosibirsk, Pirogov Street 2, 630090, Russia.

<sup>3</sup>Senckenberg Naturhistorische Sammlungen Dresden Museum für Mineralogie und Geologie, Section Geochronologie.

Koenigsbruecker Landstrasse 159, 01109 Dresden, Germany, [mandy.hofmann@senckenberg.de](mailto:mandy.hofmann@senckenberg.de)

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Large river deposits have been studied in the Foothills of the East Sayan Ridge in the Muksut Member of the late Ediacaran Aisa Formation. Sedimentation in the peripheral foreland basin in southwest Siberia began simultaneously with foredeep subsidence and transgression across an eastern passive margin of the paleocontinent [1]. The parameters and problems of big rivers have been reviewed [2, 3, 4]. The Muksut fluvial system has seven specific features for big rivers. (1) Valley widths reach up to 30-40 km. (2) Single channel widths range from hundreds of meters to 10 km. (3) Deposits single channels reach 40-60 m in thickness. (4) Thicknesses of valley fills as a whole are up to 200 m. (5) Measured thicknesses of levee deposits are up to tens meters. (6) Crossbed sets are up to 6 m thick and architectural element DA are typically up to 20 m thick [5]. (7) River depths reached 15-20m based heights of intrachannel bars. Unidirectional currents transported sediment from west to east on average (present-day) towards the Siberian Platform interior. The large river transported more 350,000 km<sup>3</sup> of medium to fine-grained lithic and quartzose sand and silt onto the Siberian Platform as a result of denudation of a recycled orogen provenance. Sandstones and siltstones consist of grains of quartz, sericite and chlorite schist, quartz-bearing weakly metamorphosed fine-grained siliciclastic rocks, muscovite-biotite slates, polycrystalline quartz and chert. A small percentage of feldspar and an absence of volcanogenic lithic fragments demonstrate erosion of a passive continental margin resulting from palaeocontinental collision.

Paleomagnetic and detrital zircon data are used to reconstruct the extent of the Muksut drainage basin in Ediacaran Pannotia (Gondwanaland) supercontinent space. In the late Ediacaran, Siberia was located near the northern margin of the Laurentia palaeocontinent [6, 7] and the Siberian foreland sedimentary basin was sourced by clastics and detrital zircons from the North and South parts of the Rodinia supercontinent. Detrital zircons define several age clusters characteristic of the Kenorland and Nuna supercontinents, the Laurentia palaeocontinent in particular the events for the Grenvillian orogeny (1100-900 Ma), Rodinia rifting (800-700 Ma) and beginning the Pannotia assembly (650 Ma).

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