



## Dyke belt in North Western margin of Siberian platform

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The Early Triassic dyke swarm belt is strengthening at about 500 km (50-60 km width) along the northern margin of Siberian platform. Its locations is limited from the north by rift structure of the Yenisei-Khatanga trough, and from the south by Kystyktah-Ayan-Ambardah uprise. From west to east dyke belt is crossing Norilsk, Kamensky and Maimecha-Kotuisckaya province. In this direction the composition of dykes changing from basic through alkali-basic to alkali-ultramafic varieties. The thickness of dykes varies from 0,5-10m up to 90 m and length - from 5-15 m to 140 km. The orientation of the bulk of dykes coincides with the direction of the major structural and tectonic lineaments of the region. Dykes are often refer to the fault planes. The composition of dykes may vary along the stretches.

The density of hundreds of basaltic dykes and small intrusions in the dyke swarms is not permanent and sometimes essentially uneven. They form a compact dyke swarms of dykes, stocks and sub layering bodies veins. In dyke package on Huor-Uyallah river here are 20 subparallel dykes of different chemical composition at a distance of 2 km Lack of the evidence of the dykes crossing allows to assume their formation during the same magmatic cycle. Dykes cross cut through the entire incision of basaltic plateau. They did not created the flow effusions and refer to the final stage trap magmatism. Ar/Ar age of the youngest dykes in the province Kamenska 238-247 Ma. the age of lamproite dyke in Norilsk province is 235 Ma.

Dykes are represented by dolerites trachydolerites, syenites, minettes, lamprophyres (camptonite, spessartite, vosgesite), avgitites, melanephelinite, alnoites, limburgites alkaline picrites, meimechites. Their content vary widely: SiO<sub>2</sub> - 35,7-62,6; TiO<sub>2</sub>- 0,4-7,5; Al<sub>2</sub>O<sub>3</sub>- 4,4-17,5; Fe<sub>2</sub>O<sub>3</sub>- 4,6-20,6; MnO- 0,08-0,44; MgO- 0,8-31,5; CaO- 0,7-15,4; Na<sub>2</sub>O- 0,01-6,5; K<sub>2</sub>O 0,8-5,3 wt.%; P<sub>2</sub>O<sub>5</sub> 0,1-1,2 wt.%.

The Bolsheavamskaya volcanic basin in Kamensky province is most abundant in highly alkali-basid dykes. There are undifferentiated and layered dykes, glassy and crystalline, single and multi-phase, with symmetric and asymmetric internal structure, with uniform or contrasting composition of the individual phases. Multiphase dykes along the. Namakan river have symmetrical "dyke dyke" structure. Glassy dykes are usually composed of olivine clinopyroxenite or picritic olivine porphyres. The number of dykes phases in the same locality may reaches 5. The internal structure of dykes are symmetric. The dyke in dyke consists of the quench zone in inner contact zone with silicate glass and carbonate globules and enriched by rounded K-feldspar, potassium feldspar with kaersutite + mica glomeroporphyric intergrowth. In crystalline dykes contact zones are composed of variolitic clinopyroxenites and central by picritic porphyries. Contact zone composed of clinopyroxenites crystallized from a supercooled melt. Having elevated CaTi- and CaAl-tschermak components.

This Dyke belt was formed by scattered spreading. Multiphase dykes were formed during multiple tectonic fracturing. Wide chemical variations are caused by fluid-magmatic melt interaction in magma feeding channels. Multistage splitting of magmatic melts to different in composition liquids took place with the participation of CO<sub>2</sub>, H<sub>2</sub>, F, Cl, CH<sub>4</sub>.