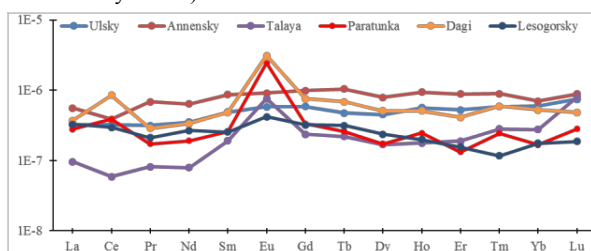


Geochemistry of thermal waters of the Okhotsk Sea shore, Far East of Russia

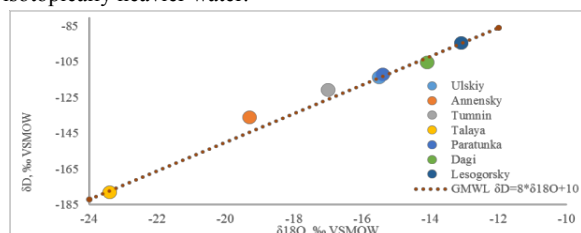
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New data on hydrogeochemistry of thermal waters of the Okhotsk sea-shore (Ulskiy, Annensky Tumnin, Talaya, Paratunka, Dagi and Lesogorsky) is presented in the paper. Sikhote-Alin ridge thermal waters with crystalline host rocks refer to sulfate-hydrocarbonate or hydrocarbonate sodium fresh waters with elevated silicon content (up to 41 ppm), lowest TDS (<0.3 g/L), alkaline (9.1<pH<9.3). Thermal waters of Talaya and Paratunka refer to sedimentary basins, resulting in presence of sulfate and chlorine in main ions, higher TDS (1–1.2 g/L), lower pH (~8.6) values and reducing conditions ($-82 > Eh > -157$ mV). Geological conditions were proved by shapes of REE patterns (positive Eu-anomaly for sedimentary basins).



Stable water isotopes led us to divide roughly studied waters into two groups, using peculiarities of moisture source for water recharge areas. First group: Tumin, Annensky and Talaya with more “continental” climate as for mainland thermal waters, forming isotopically lighter water and second group: Ulskiy, Paratunka, Dagi and Lesogorsky, with “marine” climate of Sakhalin and Kamchatka, forming isotopically heavier water.



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