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Rongsheng Zhao, Xuanlong Shan, Jian Yi, Xianli Du, Ye Liang, Yunfeng Zhang

Rongsheng Zhao (Tel.: +86 1524600716, E-mail: 15246007162@163.com), Xuanlong Shan (Tel.: +86 13943133050 shanxl@jlu.edu.cn), Jian Yi, (Tel.: +86 13756022754, E-mail: yijian_x@yahoo.com), Xianli Du (Tel.: +86 13704595320, 335633578@qq.com) Ye Liang (Tel.: +86 18943680986, E-mail: liangye16@mails.jlu.edu.cn) Earth Science College, Jilin University, 2199 Jianshe Street, 130061, Changchun, PR China.

Yunfeng Zhang (Tel.: +86 15164542681, E-mail: 756948048@qq.com). Earth Science College, Northeast Petroleum University, 199 Fazhan Road, 163318, Daqing, PR China.

Corresponding author: Xuanlong Shan (Tel.: +86 13943133050 shanxl@jlu.edu.cn)

ABSTRACT

The goal of this paper is to systematically analyze the geochemical and isotopic characteristics (^{18}O, D, T, $^{13}C_{HCO3}$, and DOC) of a HCO_3-Na thermal water to determine its origin, formation mechanism, and circulation pattern in the Gudian slope, Yitong Basin, Northeast China. Schoeller diagrams and isotope data indicate that this thermal water is not connected to groundwater or river water and that its recharge source is immature water with low $\delta^{18}O$ and δD values that originates from the Changbaishan area. This result was also confirmed by its DOC ^{13}C value