

Accepted Manuscript

Geochemistry of HCO₃-Na thermal water from the Gudian slope: Insights into fluid origin, formation mechanism and circulation in the Yitong Basin, Northeast China

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



PII: S0883-2927(17)30318-9

DOI: [10.1016/j.apgeochem.2017.10.014](https://doi.org/10.1016/j.apgeochem.2017.10.014)

Reference: AG 3971

To appear in: *Applied Geochemistry*

Received Date: 5 June 2017

Revised Date: 17 October 2017

Accepted Date: 19 October 2017

Please cite this article as: Zhao, R., Shan, X., Yi, J., Du, X., Liang, Y., Zhang, Y., Geochemistry of HCO₃-Na thermal water from the Gudian slope: Insights into fluid origin, formation mechanism and circulation in the Yitong Basin, Northeast China, *Applied Geochemistry* (2017), doi: 10.1016/j.apgeochem.2017.10.014.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Geochemistry of HCO₃-Na thermal water from the Gudian slope: Insights into fluid origin, formation mechanism and circulation in the Yitong Basin, Northeast China

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 (¹⁸O, D, T, ¹³C_{HCO₃}, and DOC) of a HCO₃-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 $\delta^{18}\text{O}$ and δD values that originates from the Changbaishan area. This result was also confirmed by its DOC ¹³C value

Download English Version:

<https://daneshyari.com/en/article/8863164>

Download Persian Version:

<https://daneshyari.com/article/8863164>

[Daneshyari.com](https://daneshyari.com)