



ISSN 0371-5736



地質論評

GEOLOGICAL REVIEW

第 63 卷 第 3 期

Vol.63 No.3

2017



中国地质学会
《地质论评》编辑委员会
科学出版社

主办
编辑
出版

previous study paleogeotemperature dates, so paleogeotemperature calculating from chlorite is credible.

Conclusions: The paleotemperature is much higher than current temperature in this area, high paleogeotemperature promote chemical densification effect, while it is more easier changed Solid type III cheese to gaseous hydrocarbons, like CH₄. There are a large number of oil and gas fields in the area, high paleotemperature should be an important factor to its formation.

Keywords: Sichuan Basin; Upper Triassic Xujiahe Formation; authigenic chlorite; compositional evolution; Paleogeotemperature

Acknowledgements: This research was supported by the National Natural Science Foundation of China (No. 41402085) and Open fund of Key Laboratory of nuclear resources and environment (No. NRE1403). The Editor Liu Zhiqiang, and anonymous referees are thanked for their constructive comments and their significant improvements to the manuscript.

First author: DAI Chaocheng, male, born in 1980, doctor, lecture. Mainly engaged in sedimentology.
Address: No. 418, Guanglan Road, Economic Development Zone, Nanchang, 330000. Email: daichaocheng@qq.com

Manuscript received on: 2016-09-04; Accepted on: 2017-04-22; Edited by: LIU Zhiqiang

Doi: 10.16509/j.georeview.2017.03.021

GEOLOGICAL REVIEW

Vol. 63 No. 3 2017

CONTENTS

Scholarly Discussion

Crustal Density Structures beneath Orogenic Belts of Chinese Continent	YANG Wencai, QU Chen, HOU Zunze, YAN Ping, YU Changqing(547)
Paleomagnetic Constrains on the Reversed S-shaped Structure Deformation of the Lanping—Simao Basin in the Southeastern Xizang (Tibet) Plateau	XU Yingchao, TONG Yabo, WANG Heng, YANG Zhenyu (567)
Salt Tectonic and Prospecting Potassium Research in Simao Basin	LIU Ying, ZHENG Mianping, ZHANG Zhen, YU Changqing, MIAO Zhongying, ZHANG Kai, GAO Lei(580)
Transition of Yanshanian Two-period Tectonic Property in the Eastern Detachment Belt of Lushan Metamorphic Core Complex: Evidence from Zircon U – Pb Dating	YANG Fan, SONG Chuanzhong, REN Shenglian, LI Jiahao, LI Hailong, WANG Wei(595)
Geochemical Characteristics and Genesis of the Granite from Wulan Area, North Qaidam	WU Di, WU Cailai, LEI Min, LI Tianxiao(615)
The Miocene High-K Alkaline Rocks in Tashkorgan Region, Northeastern Pamir: Formation Mechanism and Tectonic Implications	XU Xiaoyin, CAI Zhihui, XU Zhiqin, CAO Hui(629)
Genesis of Devonian Spherical Limestone Related to Methane Seepage in the Xiyahé barite deposit, Ziyun, Southern Guizhou	ZHANG Xu, GAO Junbo, YANG Ruidong, CHEN Jun, ZHENG Lulin, WEI Huairui, BAO Miao(641)
Miocene Adakitic Magmatism Located at the Northern Part of Nanmuling Basin in Lhasa Block: Zircon U-Pb Age, Hf Isotope and Geochemical Characteristic	FU Yangang, HU Guyue, GAO Yiming, YANG Zongyao, LIN Bin(658)
Zircon LA-ICP-MS Age Dating, Petrogenesis and Tectonic Implications of the Middle Triassic Granites from the Zhongzaohuo Area, East Kunlun	JIAN Kunkun, ZHU Yunhai, WANG Liwei, GAO Feng, LIU Xiangdong, HE Yuanfang, YUAN Zhang, CHEN Jiping, GAO Weiqiang (676)
Study on the Structural Deformation Characteristics of the Shear Zone in the Northern Boundary of the Tongbai Complex	LI Hailong, SONG Chuanzhong, HAN Jianjun, LI Jiahao, REN Shenglian, ZHANG Yan, WANG Wei, YANG Fan, LI Zhenwei, WANG Yangyang, YUAN Fang, LAN Ruixuan (693)

A Study on Quaternary Glaciation Moraines in Mount Mengshan, Shandong Province with Optically Stimulated Luminescence (OSL) and Comparison of Glacial Period Division	WANG Zhaobo, ZHANG Jian, WANG Jiangyue, ZHANG Yingsong, BIAN Qing, GUO Qipeng(702)
Analysis of the Reservoir Architecture of Thick Sandbody and Its Control on Remaining Oil in Middle Nearshore Subaqueous Fan —Taking the 4th Layer, 3rd Member, Hetaoyuan Formation, Eocene, in Zhaowa Oilfield, Miyang Sag, Nanxiang Basin as an Example	YIN Yanshu, LIU Yuan(718)

Scientific Review

Paleoearthquake Researches via Soft Sediment Deformation of Load, Ball-and-Pillow Structure: A Review	ZHONG Ning, JIANG Hanchao, LIANG Lianji, XU Hongyan, PENG Xiaoping(737)
Research Status and Existing Problems of Silicate Liquid Immiscibility in Intermediate—Basic Magma	WANG Kun, DONG Huan, CAO Yonghua, WU Xiaoji(757)
The Occurrence and Evolution of Gold in Modern Seafloor Hydrothermal Systems	HUANG Wei, TAO Chunhui, SUN Zhilei, LI Jun, CUI Ruyong (769)

Research Progress

Location and New Found of Yanliao Biota in Western Liaoning	GAO Fuliang, JIANG Yang, ZHANG Guoren, PAN Yuqi, WU Zijie, WANG Xuan(780)
LA-ICP-MS Zircon U-Pb Ages of the Fine-grained Granites in Gaoping Area, South Zhuguang Mountains and Their Geological Significances	YU Hang, CAI Yuqi, LI Weilin, HUANG Guolong, PANG Yaqing, JIANG Weibing, ZHANG Chuang(792)
Low to Moderate Temperature, Low Salinity and Enrichment of CO ₂ Hydrothermal Fluid at Shangxu Orogenic Gold Deposit in Shuanghu, Northern Xizang(Tibet): Evidence from Fluid Inclusions, H—O Isotopic Composition	XIAO Wanfeng, LIU Hong, LI Guangming, HUANG Hanxiao, MA Dongfang, ZHANG Zhilin, YAN Guoqiang, ZHANG Hong(807)
The Zircon LA-ICP-MS U-Pb Ages and Geochemical Characteristics of Ta'ershan Intrusions, Southern Shanxi Province, and Their Geological Implications	YANG Yao, ZHAO Junfeng, LIU Chiyang, XUE Rui, YAN Zhandong(821)
Forecasting Method and Application of Oil and Gas Flowing Backward Migration Patterns in Range of Distribution	FU Guang, ZHANG Huan(829)
Authigenic Chlorite Compositional Evolution and Temperature Calculation of Xujiahe Formation Sandstone in Central Sichuan Basin	DAI Chaocheng, LIU Xiaodong, RAO Qiang, ZHANG Huisheng(841)

(Executive editors of this issue: ZHANG Yuxu, LIU Zhiqiang; figures editor: LIU Meng)

地 质 论 评

2017 年 第 63 卷 第 3 期

目 次

学 术 讨 论

- 中国大陆造山带地壳密度结构特征 杨文采,瞿辰,侯遵泽,颜萍,于常青(539)
青藏高原东南缘兰坪—思茅盆地反 S 型构造属性的古地磁约束 徐颖超,全亚博,王恒,杨振宇(549)
滇西南思茅盆地盐构造研究及找钾初探 刘璎,郑绵平,张震,于常青,苗忠英,张凯,高磊(568)
庐山变质核杂岩东侧拆离带两期构造性质转换:锆石 U-Pb 年代学证据 杨帆,宋传中,任升莲,李加好,李海龙,王微(581)
柴达木北缘乌兰地区花岗岩岩石地球化学特征及成因 吴迪,吴才来,雷敏,李天啸(597)
东北帕米尔塔什库尔干中新世高钾碱性岩的成因机制与大地构造意义 徐晓尹,蔡志慧,许志琴,曹汇(616)
贵州紫云泥盆系重晶石矿床中与古甲烷渗漏事件有关的球状灰岩成因厘定
..... 张旭,高军波,杨瑞东,陈军,郑禄林,魏怀瑞,鲍森(630)
拉萨地块南木林盆地北缘中新世高锶低钇岩浆作用:锆石 U-Pb 年龄、Hf 同位素和地球化学特征
..... 付燕刚,胡古月,高一鸣,杨宗耀,林彬(643)
东昆仑中灶火地区中三叠世花岗岩 LA-ICP-MS 锆石 U-Pb 定年、岩石成因及构造意义
..... 菅坤坤,朱云海,王利伟,高峰,刘向东,何元方,袁璋,陈继平,高维强(659)
桐柏杂岩北界剪切带的构造变形特征研究
..... 李海龙,宋传中,韩建军,李加好,任升莲,张妍,王微,杨帆,李振伟,王阳阳,袁芳,兰瑞烜(677)
山东蒙山第四纪冰川遗迹光释光测年研究及冰期划分与对比 王照波,张剑,王江月,张盈松,卞青,郭启鹏(694)
近岸水下扇扇中厚砂体储层构型及对剩余油控制——以南襄盆地泌阳凹陷古近系核桃园组三段四砂组 2 小层为例
..... 尹艳树,刘元(703)

科 技 述 评

- 软沉积物变形中负载、球—枕构造的古地震研究综述 钟宁,蒋汉朝,梁莲姬,徐红艳,彭小平(719)
中基性岩浆的不混溶作用及存在的问题 王坤,董欢,曹永华,武晓霁(739)
金在现代海底热液系统中的分布及演化 黄威,陶春辉,孙治雷,李军,崔汝勇(758)

研 究 进 展

- 辽西燕辽生物群分布特征及新发现 高福亮,江洋,张国仁,潘玉啟,吴子杰,王烜(770)
诸广山南部高坪地区细粒花岗岩 LA-ICP-MS 锆石 U-Pb 年龄及其地质意义
..... 虞航,蔡煜琦,李伟林,黄国龙,庞雅庆,江卫兵,张闯(781)
藏北双湖县商旭造山型金矿床的中低温低盐度 CO₂ 成矿流体:流体包裹体、H—O 同位素的证据
..... 肖万峰,刘洪,李光明,黄瀚霄,马东方,张智林,闫国强,张红(793)
山西南部塔儿山岩体锆石 LA-ICP-MS U-Pb 年龄、地球化学特征及其地质意义 杨瑶,赵俊峰,刘池洋,薛锐,闫占冬(809)
油气倒灌运移形式分布区预测方法及其应用 付广,张桓(822)
川中地区须家河组自生绿泥石成分演化及其形成温度计算 戴朝成,刘晓东,饶强,张怀胜(831)

(本期执行总编辑 章雨旭、刘志强 图件修编 刘萌)

《地质论评》刊头图案说明

1922年中国地质学会成立，并创办了《The Bulletin of Geological Society of China》(即《中国地质学会志》，主要为英文，包括德文、法文等)，标志着中国地质学家已经成长起来。至1936年，先辈们觉得“但中文刊物，至今尚付缺如，实为遗憾。夫一国学术之发表，岂能尽恃外国文字，此乃事理之至明者”(谢家荣，地质论评发刊辞)，遂创办了第一个中文地质学定期刊物——《地质论评》。

《地质论评》创刊之时，中国正处于内忧外患之中，东北沦陷于日寇，西南被英帝国主义(当时印度尚未独立，系英国的殖民地)炮制的“麦克马洪线”划走了我90000余km²的国土，为表达我地质学者的爱国之心和忧愤之情，设计了东北受侵吞(缺右上角)、西南遭蚕食(左下有缺口)的刊头图案，自创刊号一直沿用至今。

义勇军进行曲的“中华民族到了最危险的时候”依旧时刻警醒着全中国人民！我们希望与义勇军进行曲同时代诞生的《地质论评》刊头图案也能像她一样，继续激励全中国地质工作者立足于中华大地，在促进世界地质学学术理论发展的同时，切实地为国家、为民族解决资源和环境等问题贡献我们的智慧，为祖国的进一步繁荣富强贡献我们的力量。

《地质论评》已过耄耋之年，她将一如继往地坚持论、评、述、报之特色，坚持“百花齐放、百家争鸣”的宗旨，为地质学的学术进步永葆青春活力；也敬请各位学者继续支持。

《地质论评》编辑部 2017年5月

地 质 论 评
DIZHI LUPING
(双月刊，1936年创刊)
第63卷 第3期 2017年5月15日出版

GEOLOGICAL REVIEW
(Bimonthly, Started in 1936)
Vol. 63 No. 3
Published on May 15, 2017

主 管 中国科学技术协会
主 办 中国地质学会
编 辑 《地质论评》编辑委员会
地 址：北京阜成门外百万庄路26号
邮 政 编 码：100037；电 话：010-68999804
电子邮箱：georeview@cags.ac.cn
网 址：www.geojournals.cn/georev
主 编 杨文采
出 版 科 学 出 版 社
100717, 北京东黄城根北街16号
排 版 《地质论评》编辑部
印 刷 装 订 北京地大彩印有限公司
总 发 行 处 北京报刊发行局
订 购 处 全国各邮电局
国 外 总 发 行 中国国际图书贸易总公司
(中国国际书店)
北京399号信箱，邮政编码100044

Competent Authorities: China Association for Science and Technology
Sponsored by Geological Society of China
Edited by Editorial Committee of GEOLOGICAL REVIEW, 26, Baiwanzhuang Road, Beijing, 100037; Tel.: 010-68999804;
Email: georeview@cags.ac.cn
Website: www.geojournals.cn/georev
Editor in chief YANG Wencai
Published by Science Press, 16, Donghuangchenggen North Street, Beijing, 100717, China
Composed by Editorial Department of GEOLOGICAL REVIEW
Printed by Beijing Dida Colored Printing Co., Ltd.
Distributed by Beijing Bureau for Distribution of Newspapers and Journals
Subscription handled by Local Post Offices of China
Distributed abroad by China International Book Trading Corporation(Guoji Shudian)
P. O. Box 399, Beijing 100044, China
International Periodical No: BM337

刊号: ISSN 0371-5736 国内邮发代号: 2-382 国外发行代号: BM337 定价: 50.00元
CN 11-1952/P

国内外公开发行

ISSN 0371-5736



05>

9 770371 573175