

## Accepted Manuscript

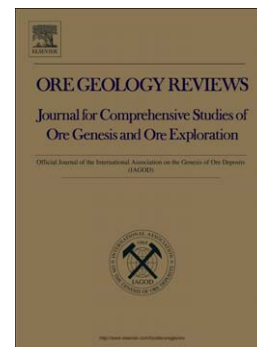
Age and tectonic setting of the Udokan sediment-hosted copper-silver deposit,  
Transbaikalia, Russia

José Perelló, Richard H. Sillitoe, Alexander S. Yakubchuk, Victor A.  
Valencia, Paula Cornejo

PII: S0169-1368(16)30467-X  
DOI: doi: [10.1016/j.oregeorev.2016.11.004](https://doi.org/10.1016/j.oregeorev.2016.11.004)  
Reference: OREGEO 2005

To appear in: *Ore Geology Reviews*

Received date: 3 August 2016  
Revised date: 4 November 2016  
Accepted date: 7 November 2016



Please cite this article as: Perelló, José, Sillitoe, Richard H., Yakubchuk, Alexander S., Valencia, Victor A., Cornejo, Paula, Age and tectonic setting of the Udokan sediment-hosted copper-silver deposit, Transbaikalia, Russia, *Ore Geology Reviews* (2016), doi: [10.1016/j.oregeorev.2016.11.004](https://doi.org/10.1016/j.oregeorev.2016.11.004)

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.

## Age and tectonic setting of the Udokan sediment-hosted copper-silver deposit, Transbaikalia, Russia

José Perelló<sup>a,\*</sup>, Richard H. Sillitoe<sup>b</sup>, Alexander S. Yakubchuk<sup>c</sup>, Victor A. Valencia<sup>d</sup>,  
Paula Cornejo<sup>a</sup>

<sup>a</sup> Antofagasta Minerals S.A., Apoquindo 4001, piso 18, Las Condes, Santiago, Chile

<sup>b</sup> 27 West Hill Park, Highgate Village, London N6 6ND, England

<sup>c</sup> Orsu Metals Corporation, Berkeley Square House, Berkeley Square, London W1J 6BD, England

<sup>d</sup> School of the Environment, Washington State University, Pullman, Washington 99164- 2812, U.S.A.

\*E-mail address: jperello@aminerals.cl

### ABSTRACT

The Udokan Cu–Ag deposit in Transbaikalian Russia is one of the largest individual examples of the sediment-hosted stratiform type. Mineralization is hosted by the Udokan Complex, a ~12,000-m-thick metasedimentary sequence deposited between ~2.2 and 2.06 Ga in a large intra- to peri-cratonic basin constructed over Archean basement of the Siberian craton. The basin was inverted and metamorphosed to dominantly greenschist facies at ~1.9 Ga, as a consequence of the collision between the Aldan and Stanovoi domains.

Titanite is a common constituent of the greenschist metamorphic assemblages of the Udokan Complex as well as being an integral part of the stratiform disseminated and associated veinlet Cu sulfide mineralization at Udokan. Titanite crystals were separated from a sample collected in the Medny area of the deposit where typical, high-grade, disseminated and veinlet chalcocite-bornite mineralization is well exposed. Titanite crystals from the disseminated and veinlet fractions were separately dated by the ID-TIMS U–Pb method, with the disseminated fraction returning a concordia age of  $1895.3 \pm 9.7$  Ma and the veinlet fraction a concordia age of  $1896.7 \pm 7.8$  Ma. Combination of both titanite fractions produced a concordia age of  $1896.2 \pm 6.2$  Ma.

Download English Version:

<https://daneshyari.com/en/article/5782432>

Download Persian Version:

<https://daneshyari.com/article/5782432>

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