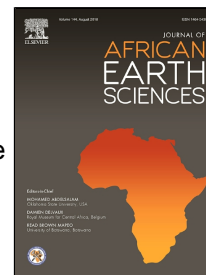


Accepted Manuscript

Tectonomagmatic Setting, Petrography, Petrochemistry and Mineralogy of the Divar Cu-Fe Deposit in the Sistan Suture Zone, Eastern Iran



Houshang Pourkaseb, Alireza Zarasvandi, Mansour Adelpour, Masoud Hoseini

PII: S1464-343X(18)30201-2
DOI: 10.1016/j.jafrearsci.2018.07.005
Reference: AES 3267
To appear in: *Journal of African Earth Sciences*
Received Date: 19 December 2017
Accepted Date: 06 July 2018

Please cite this article as: Houshang Pourkaseb, Alireza Zarasvandi, Mansour Adelpour, Masoud Hoseini, Tectonomagmatic Setting, Petrography, Petrochemistry and Mineralogy of the Divar Cu-Fe Deposit in the Sistan Suture Zone, Eastern Iran, *Journal of African Earth Sciences* (2018), doi: 10.1016/j.jafrearsci.2018.07.005

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.

1 **Tectonomagmatic Setting, Petrography, Petrochemistry and Mineralogy of the**
2 **Divar Cu-Fe Deposit in the Sistan Suture Zone, Eastern Iran**

3
4 **Houshang Pourkaseb*¹, Alireza Zarasvandi¹, Mansour Adelpour¹, Masoud Hoseini²**

5 ¹Department of Geology, Faculty of Earth Science, Shahid Chamran University (SCU),
6 Ahvaz, Iran

7 ²Department of Geology, Faculty of Earth Science, Shahid Beheshti University (SBU),
8 Tehran, Iran

9 *Correspondence: h.pourkaseb@scu.ac.ir; Tel.: +98-916-609-5216

10
11 **Abstract**

12 The Divar Cu-Fe deposit is located in the Nehbandan Ophiolite Complex (NOC). It is hosted
13 in the Sistan Suture Zone (SSZ) marking the boundary between the Lut and Afghan
14 continental blocks. This deposit is hosted in various ophiolitic rock units representing a
15 tectono-sedimentary mélangé that is generally interpreted as remnants of the Sistan oceanic
16 lithosphere. The country rocks cropping out in the Divar deposit are mantle peridotites,
17 gabbro, cumulate gabbro, basalt and pelagic sediments that formed in the mid-ocean
18 ridge (MOR) setting. Observations from outcrops and drill cores indicate that mineralization
19 in the studied area is mainly massive. There is also a poorly developed
20 stockwork/disseminated ore at the bottom of the massive zone and a surface-oxidized zone or
21 gossan at the top of deposit. Disseminated and stockwork ores are hosted in the serpentinized
22 peridotites and severely altered pillow basalt. According to mineral assemblages and the
23 cross-cutting relationships of the orebody, two mineralization stages are identified: (I) stage I
24 is characterized by sulphide minerals including pyrite, chalcopyrite, pyrrhotite and sphalerite;
25 and the second stage (II) is dominated by Fe-oxide minerals (e.g., magnetite and specularite).
26 It seems that the increase in the pH and oxygen fugacity along with decreasing sulfur activity
27 lead to the increase of magnetite precipitation from the ore-forming fluids. In this stage (II),
28 magnetite replaces all pre-existing sulphide minerals of the first-stage (I). The geological,
29 mineralogical and geochemical features of the Divar deposit together with its trace element,
30 Zn-Cu-Pb-Au-Ag signatures suggest that the Divar deposit can be attributed to a magnetite-
31 rich ophiolite-hosted (Cyprus-type) VMS deposit, resulting from a submarine hydrothermal
32 system.

33 **Keywords:** Divar Cu-Fe deposit; Cyprus type; MOR setting; Sistan Suture Zone.

Download English Version:

<https://daneshyari.com/en/article/8913380>

Download Persian Version:

<https://daneshyari.com/article/8913380>

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