

## Primitive island arc ankaramite in the Urals: An example of primary melt for the Ural-Alaskan type ultramafic intrusions

E. PUSHKAREV<sup>1\*</sup>, V. KAMENETSKY<sup>2</sup>, I. GOTTMAN<sup>1</sup>,  
A. RYAZANCEV<sup>3</sup> AND G. YAXLEY<sup>4</sup>

<sup>1</sup>IGG RAS, Pochtovy 7, Yekaterinburg, Russia, 620075  
(pushkarev.1958@mail.ru)

<sup>2</sup>UTAS, Hobart, Tasmania, Australia, 7001

<sup>3</sup>GIN RAS, Moscow, Russia, 109017

<sup>4</sup>ANU, Canberra, Australia, 0200

The primitive Cpx-porphyrific ankaramite were found as fragments of dykes and lavas, intersected by typical calc-alkaline andesites, in serpentinite melange in the western part of the Magnitogorsk island-arc zone (Southern Urals).

1466	WR	GM	MI	Cr-Sp
SiO <sub>2</sub>	47.44	47.89	46.50	
TiO <sub>2</sub>	0.17		0.16	0.15
Al <sub>2</sub> O <sub>3</sub>	6.89	10.69	7.12	4.93
Cr <sub>2</sub> O <sub>3</sub>	0.20		1.61	63.54
FeO	8.84	9.39	13.75	18.75
MnO	0.21		0.28	0.10
MgO	18.48	16.26	18.88	11.60
CaO	17.53	15.77	10.49	
Na <sub>2</sub> O	0.10		0.84	
K <sub>2</sub> O	0.01		0.34	
P <sub>2</sub> O <sub>5</sub>	0.12		0.08	
Total	100.00	100.00	100.00	99.07
Mg#	0.79	0.76	0.71	0.53

**Table 1:** Bulk composition of ankaramite (WR), groundmass (GM), homogenized melt inclusion (MI) and chromite phenocryst (Cr-Sp).

The composition of ankaramites is characterised by high Mg# and CaO and  $La_N/Yb_N=3-4$ , with very low Al<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub> and alkali elements (Table). We infer that the ankaramite magma, capable of generating large volumes of olivine-clinopyroxene cumulates and Fe-Pt alloys that entrapped in liquidus Cr-spinel could be primary for the Ural-Alaskan-type complexes.

*The study is supported by RFBR: 13-05-00597, 13-05-96031*