

IV. ВУЛКАНИЗМ РАЗЛИЧНЫХ ГЕОТЕКТОНИЧЕСКИХ ОБСТАНОВОК (продолжение)

ГЕОЛОГИЧЕСКАЯ И ВЕЩЕСТВЕННАЯ ЭВОЛЮЦИЯ ВУЛКАНА УКСИЧАН В ПЛИОЦЕНЕ И ПЛЕЙСТОЦЕНЕ (СРЕДНИЙ ХРЕБТ КАМЧАТКИ)

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При петролого-геохимических исследованиях магматических объектов островодужных систем одной из наиболее актуальных задач является разработка комплексных моделей эволюции крупных и долгоживущих вулканических центров в системе «верхняя мантия - дифференцированные серии пород - постмагматические процессы». В качестве объекта исследования здесь был выбран вулкан Уксичан - один из наиболее крупных центров эволютивной активности вулканического пояса Среднего хребта Камчатки. Детальная геологическая история формирования вулкана (племное - верхний плейстоцен - голоцен), присутствие в его строении пород различных геологических серий (умереннокалдеиной, высококалдеиной и шомонит-латитовой), современная гидротермальная активность, признаки орудавления и высокая степень геологической изученности территории послужили основой для проведения здесь специальных петролого-геохимических работ.

В геологическом строении вулканического центра выделяются: 1) средний племное (?) - высококалдеиной вулканической фундамент ($N_1^{17}-N_1^{17}$), 2) разный племное - среднекалдеиной стратовулкан Уксичан ($N_1^{17}-N_1^{17}$), 3) средний племное - разнотермической латитовой вулкан Уксичан (Q_1-Q_1), 4) разный плейстоцен - среднекалдеиной кальдера-вулкан Уксичан (Q_1-Q_1), 5) верхний плейстоцен - голоценовый (?) комплекс шомонитовидных вулканических построек и шомонит-латитовых конусов ардеального типа (Q_1-Q_1) [Огородов и др., 1967, 1972; Стефанов, Шаровый, 1980; Антанин и др., 1987; Патова и др., 1987 - фоновые материалы] (рис. 1).

По содержанию щелочей лавы вулкана Уксичан и других вулканических сооружений его территории принадлежат трем петрогеохимическим сериям: умереннокалдеиной и ее ультракалдеиной ветви, высококалдеиной (ВК) и шомонит-латитовой (ШЛ) (рис. 2). При этом лишь шомонитовые разновидности интрузивных пород центральной части кальдеры на диаграмме (SiO_2 - FeO^+MgO) обнаруживают типично известково-щелочную тенденцию эволюции составов. Все другие вулканические по петрогеохимическим признакам принадлежат толитовому типу. Умереннокалдеиной характер имеют вулканические породы фундамента, лавы верхнекалдеиной-голоценовых стратовулканов и ардеальных построек, тогда как лавы и интрузивы собственно вулкана Уксичан обладают исключительно высококалдеиной спецификой.

Высококалдеиные лавы и интрузивные породы постройки вулкана Уксичан, а также близкие к ним по составу шомонитовидные образования, обладают широким спектром характерных минералов: Pl, Ol, Orx, Crk, Fsp, Amph, Bt, TmT, - среднечлениковые, и Plm, Ap, Spd - среднечлениковые. В умереннокалдеиных вулканических верхнекалдеиной-голоценовых постройках рифтов обнаружены только Pl, Ol, Crk, Orx и TmT. Также же характерным характером и для вулканических пород фундамента, среди которых только диабазы и риоддиты иногда содержат характерные Amph. По петрографическим признакам среди пород собственно вулкана Уксичан выделяются две главные группы: 1) - обладающие порфировыми структурами породы лавы и интрузивы, а именно Mg- и Al-BK-базальты, BK-андезиты, BK-андезито-диабазы, порфириты, BK-диабазы, BK-диабазы, и 2) - обладающие аферровыми и субаферровыми структурами лавы и интрузивы (сталазитовые, петроклестатические) шомониты и латиты, кварцевые латиты. К последней группе относятся и сталазитовые трихлититы и трихлититы интрузивы, а также шомонитовые разновидности BK-базальтов.

Наряду с обычной для дифференцированных известково-щелочных и субщелочных серий тенденцией к снижению содержания TiO_2 , Al_2O_3 , FeO , MgO , CaO , Sr, Cs, Co, Ni, Cr, V и увеличению концентрации Na_2O , K_2O , Rb, Ba, Pb, Sn, B, F, Ba, Zr, Nb, Ta, с ростом кремнистости пород, для серий вулкана Уксичан отмечается особенность в поведении ряда компонентов. Так, от BK-базальтов к BK-андезитам, шомонитам и латитам наблюдается возрастание концентрации Ti и P, которые с переходом к кварцевым латитам и трихлититам начинают резко снижаться. BK-диабазы

**Sibir V Panorame Tysiacheletii Materialy
Mezhdunarodnogo Simpoziuma Tom 2**

AW Rasmussen



Sibir V Panorame Tysiacheletii Materialy Mezhdunarodnogo Simpoziuma Tom 2:

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