G 278 Mineralogy and Gemmology	G 278 Mineralogie en Gemmologie
Practical Two – 16th August, 2007	Praktika Twee – 16 August, 2007
Total Marks = 50	Totale Punte = 50
Dr. Jodie Miller University of Stellenbosch	Dr. Jodie Miller Universiteit van Stellenbosch
Due Date: 9am 23rd August 2007 / Inhandigingsdatum: 23 August 2007, 9 nm	
Relationship Between Mineral and Rock Compositions Verhouding Tusssen Minerale en Rots-samestellings	
YOUR NAME:	STUDENT NO:

OBJECTIVES

The objectives of today's practical are to:

- Learn to estimate the modal proportion of minerals in a rock
- Understand the relationship between rock and mineral compositions
- Learn to plot rocks on a QAPF diagram to determine their classification

DOELE

Die doel van vandag se prakties is om:

- Te leer hoe om die modale proporsies van minerale in 'n rots te skat
- Die verhouding tussen rots en mineraal-samestellings te verstaan
- Te leer hoe om rotse te stip op 'n "QAPF" diagram en om hul samestelling te bepaal

INSTRUCTIONS

Part A
In Part A of this practical you are given 10 plutonic rocks to look at. Provide a table listing the minerals present in each rock and their percentages. Use this information and the handout on classification of igneous rocks to classify the rocks according to the IUGS system.

Part B
You have been given an excel spreadsheet to work out the whole rock composition of a rock based on modal mineralogy. There are 10 rocks that you must generate compositions for. Build up the modal mineralogy to obtain a sensible whole rock composition and determine if the classification systems at the bottom indicate the correct rock type

INSTRUKSIES

Deel A
In Deel A van die prakties is u voorsien van 10 plutoniese gesteentes om na te kyk. Maak 'n tabel waarin u die minerale teenwoordig in elke rots lys tesame met hul persentasies. Gebruik hierdie inligting in oorleg met die gegewe klassifikasie van stollings gesteentes om die rotse volgens die "IUGS" stelsel te klassifiseer.

DEEL B
U is voorsien van 'n excel sigblad om die heelrots-samestelling volgens modale mineralogie te bepaal. Daar is 10 monsters waarvoor u 'n samestelling moet bepaal. Bou die modale mineralogie om 'n redelike heelrots-samestelling te kry en bepaal of die klassifikasiestelsels onderaan die korrekte rots-tipe aandui.

WHAT YOU MUST HAND IN

1. Table listing the modal mineralogy of the rocks from Part A and their classification
2. Excel spreadsheet (can be emailed) showing the 10 generated whole rock compositions generated at Part B
3. QAPF diagrams for both plutonic and volcanic rocks indicating where all 20 rocks plot

WAT U MOET INHANDIG

1. Tabel met die modale mineralogie van die gesteentes in Deel A en hul klassifikasie
2. Excel sigblad (kan ge-epos word) met die 10 bepaalde heelrots-samestellings soos in Deel B bepaal
3. "QAPF" diagramme vir plutoniese en vulkaniese rotse waarop al 20 rotse gestip word.