

	Average Quartz Monzonite	Diorite	Residue	Volume of QtzMonz + Residue	Volume residue/ Volume Q Monzonite
Calculation of volume					
length (km)	25	25	25	1905.817532	2.811635065
width (km)	10	10	10		
depth (km)	2	8.246305419	5.62327013		
volume (cm ³)	5E+17	2.06E+18 g	1.41E+18 g		
volume (km³)	500	2061.576355	1405.817532		

Calculation of mass of each element in quartz monzonite

	Diorite (wt %)	Average Quartz Monzonite (wt %)	Mass of oxide in quartz monzonite	Mass of oxide in diorite	Mass of oxide in residue	Composition of residue (wt %)
ρ (density)	2.9 g/cm ³	2.7 g/cm ³			3.3 g/cm ³	
SiO ₂	52.00	68.10	9.19E+17 g	3.11E+18 g	2.19E+18 g	47.20%
Al ₂ O ₃	14.40	16.20	2.19E+17 g	8.61E+17 g	6.42E+17 g	13.84%
CaO	9.00	1.70	2.30E+16 g	5.38E+17 g	5.15E+17 g	11.10%
MgO	7.30	0.58	7.83E+15 g	4.36E+17 g	4.29E+17 g	9.24%
Fe ₂ O ₃	3.90	0.70	9.45E+15 g	2.33E+17 g	2.24E+17 g	4.82%
FeO	7.87	1.30	1.76E+16 g	4.71E+17 g	4.53E+17 g	9.76%
TiO ₂	1.00	0.39	5.27E+15 g	5.98E+16 g	5.45E+16 g	1.18%
Na ₂ O	3.10	4.70	6.35E+16 g	1.85E+17 g	1.22E+17 g	2.63%
K ₂ O	1.40	6.20	8.37E+16 g	8.37E+16 g	0.00E+00 g	0.00%
P ₂ O ₅	0.21	0.14	1.89E+15 g	1.26E+16 g	1.07E+16 g	0.23%
Total	100.18	100.01	1.35E+18 g	5.98E+18 g	4.64E+18 g	100.00%

**Residue is Olivine Gabbro
or Olivine Websterite ****

**** Norm calculation is not provided and should be done in xl spreadsheet provided**