Rana Gruber AS

Postboks 434, N-8601 Mo i Rana
Tel.: +47 751 37 300, Fax: +47 37 302
e-mail: market@ranagruber.no
http: www.ranagruber.no, www.colorana.com

Rockforming Minerals in Iron Ore
"Ørtfjell" Mining District, Rana Gruber AS

Mineral	Chemical Formula	Spec. Gravity (g/cm^3)	Magnetic Property	Average Amount in Ørtfjell Iron Ore (weight %)
Hematite	Fe_2O_3	5.1	P	41
Magnetite	Fe_3O_4	5.2	F	6
Amphibole	$Ca_2(Mg_5,Fe)[OH/Si_4O_{11}]_2$	3.2	P	4 - 5
Epidote	$Ca_2(Fe,Al)Al_2[O/OH/SiO_4/Si_2O_7]$	3.3	P	4 - 5
Chlorite	$(Mg,Fe)[OH_2/Si_4O_{10}]$	2.8	P	2
Biotite	$K(Mg,Fe)_3[(OH)_2/Al_2Fe)Si_3O_{10}]$	2.9	P	1 - 2
Garnet (Spess.Alm.)	$(Fe_3Al_2,Mn_3Al_2)[SiO_4]_3$	4.3	P	0 - 1
Quartz	SiO_2	2.7	U	26
Dolomite	$CaMg[CO_3]_2$	2.9	U	5 - 6
Muscovite	$KAl_2[(OH,F)_2/Al_2Si_3O_{10}]$	2.9	U	3
Feldspar(Oligoclase)	$Na[AlSi_3O_8]$	2.6	U	2 - 3
Calcite	$CaCO_3$	2.7	U	2 - 3
Apatite	$Ca_5[(F,OH)/(PO_4)]_3$	3.1	U	1
Pyrite	FeS_2	5.0	U	Traces
Pyrrhotite	FeS	4.6	F	Traces

F = ferromagnetic, required fieldstrength of < 2 000 Gauss
P = paramagnetic, required fieldstrength of 2 000 – 20 000 Gauss
U = non-magnetic, required fieldstrength of > 20 000 Gauss