Susceptibilidade magnética

Susceptibilidade magnética (SI)

Rocha	Intervalo	Média
Sedimentar		
Calcáreo	2-280	25
Arenito	0-1660	30
Folhelho	5-1480	50
Média	0-4000	75
Metamórfica		
Anfibolito		60
Gneisse	10-2000	
Quartizito		350
Serpentinito	250-1400	
Média	0-5800	350

Rocha	Intervalo	Média
Ígnea		
Granito	0-4000	200
Dolerito	100-3000	
Diabásio	80-13000	4500
Gabro	80-7200	6000
Basalto	20-14500	6000
Piroxenito		10500
Peridotito	7600-15600	13000
Andesito		13500
Média ácidas	3-6530	650
Média básicas	44-9710	2600

Susceptibilidade magnética (SI)

TABLE 10.2 Types of magnetic susceptibilities used in magnetic methods.

Type	Symbol	Definition
Weak-field susceptibility		Magnetic susceptibility in a field roughly equivalent to the terrestrial field (≈ 40 A/m)
Mass susceptibility	k_m	Magnetic susceptibility per unit mass
Volume susceptibility	k	Magnetic susceptibility per unit volume
True susceptibility	k	Magnetic susceptibility of the sum of the susceptibilities of the constituent materials
Intrinsic susceptibility	k	Equivalent to true susceptibility
Apparent susceptibility	k_a	Magnetic susceptibility of a body considering its internal demagnetization
Effective susceptibility	k_e	Magnetic susceptibility which produces magnetization equivalent to the scalar sum of induced and remanent magnetizations [$= k(1 + Q)$ where $Q = J_{rem}/J_{ind}$]
Crystalline susceptibility		Magnetic susceptibility of a specific crystallographic direction in a substance

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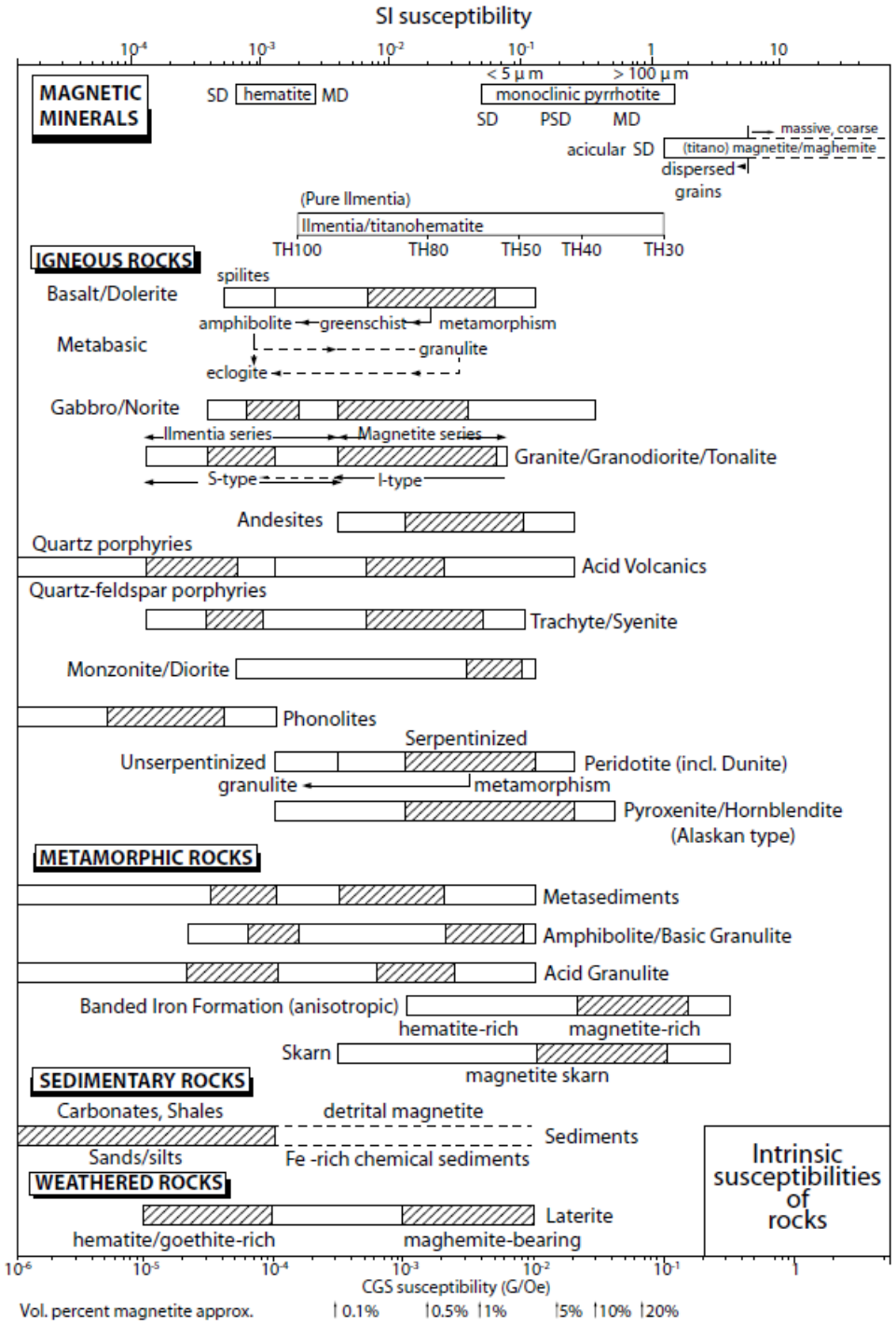

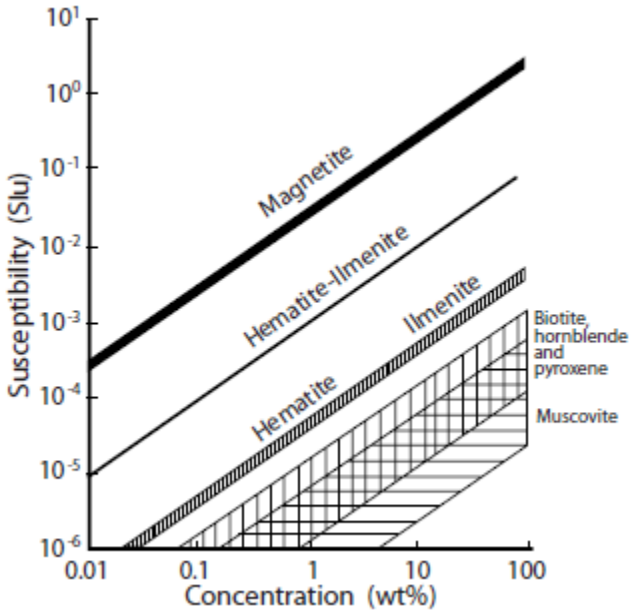

FIGURE 10.8 Mineral contributions to rock susceptibility as a function of their concentration by percent weight. From TARLING and HROUDA (1993), after SCHÖN (1996).

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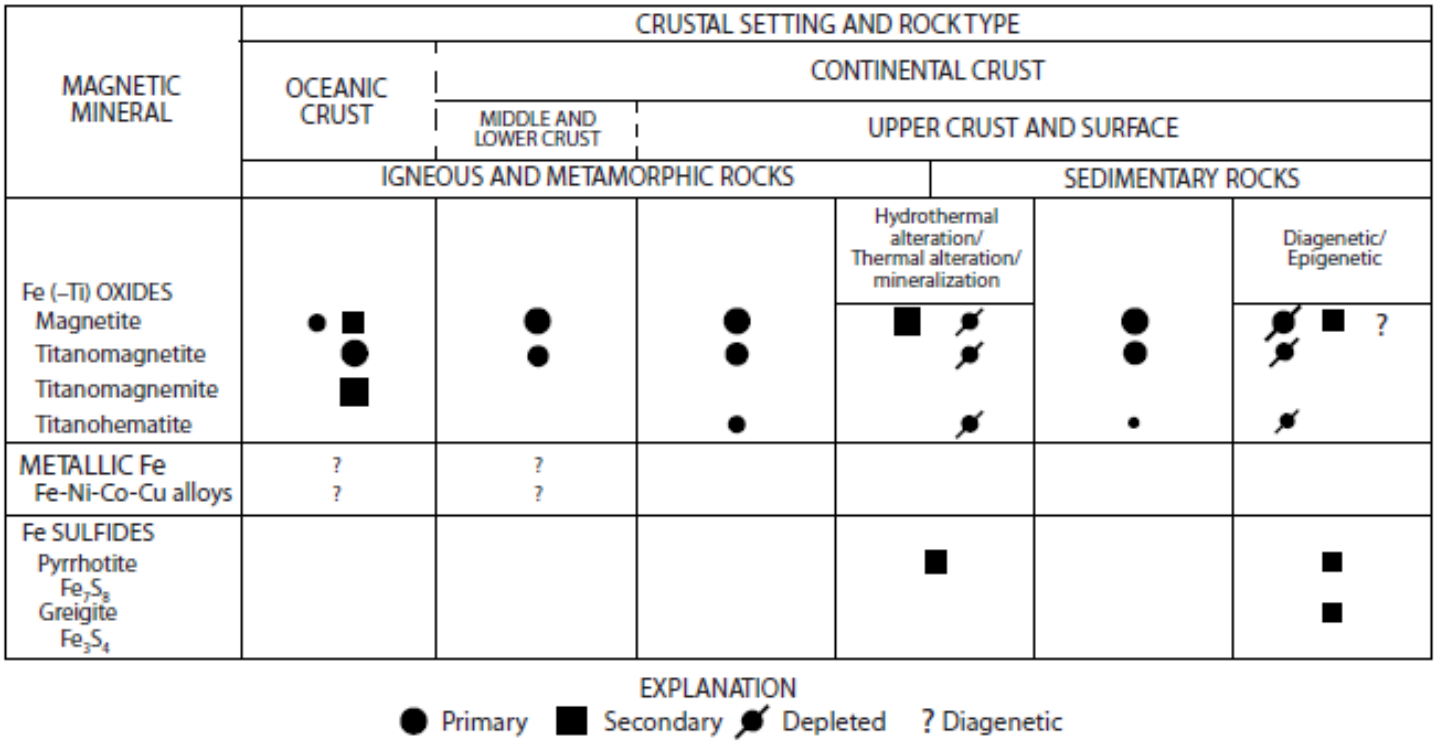

FIGURE 10.11 Aeromagnetically important minerals of the crust in terms of their distribution and origin. The minerals are divided into primary (dot) and secondary (square) origins. Primary minerals are (1) crystallized in magma, (2) deuteric alteration products in igneous rocks or metamorphic products in metamorphic rocks, or (3) detrital minerals in sedimentary rocks (including chemically precipitated magnetite, such as that deposited in banded iron formations). The dot-with-slash symbol denotes settings or conditions where minerals may be depleted. Diagenetic magnetite is denoted by a bold question mark. Secondary minerals include those formed by replacement of earlier magnetic precursors (e.g. titanomaghemite from titanomagnetite in oceanic crust) and those formed by nucleation or from a non-magnetic precursor. The size of the symbols crudely indicates their relative abundance within a single column and cannot be meaningfully compared between columns. After REYNOLDS *et al.* (1990).

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