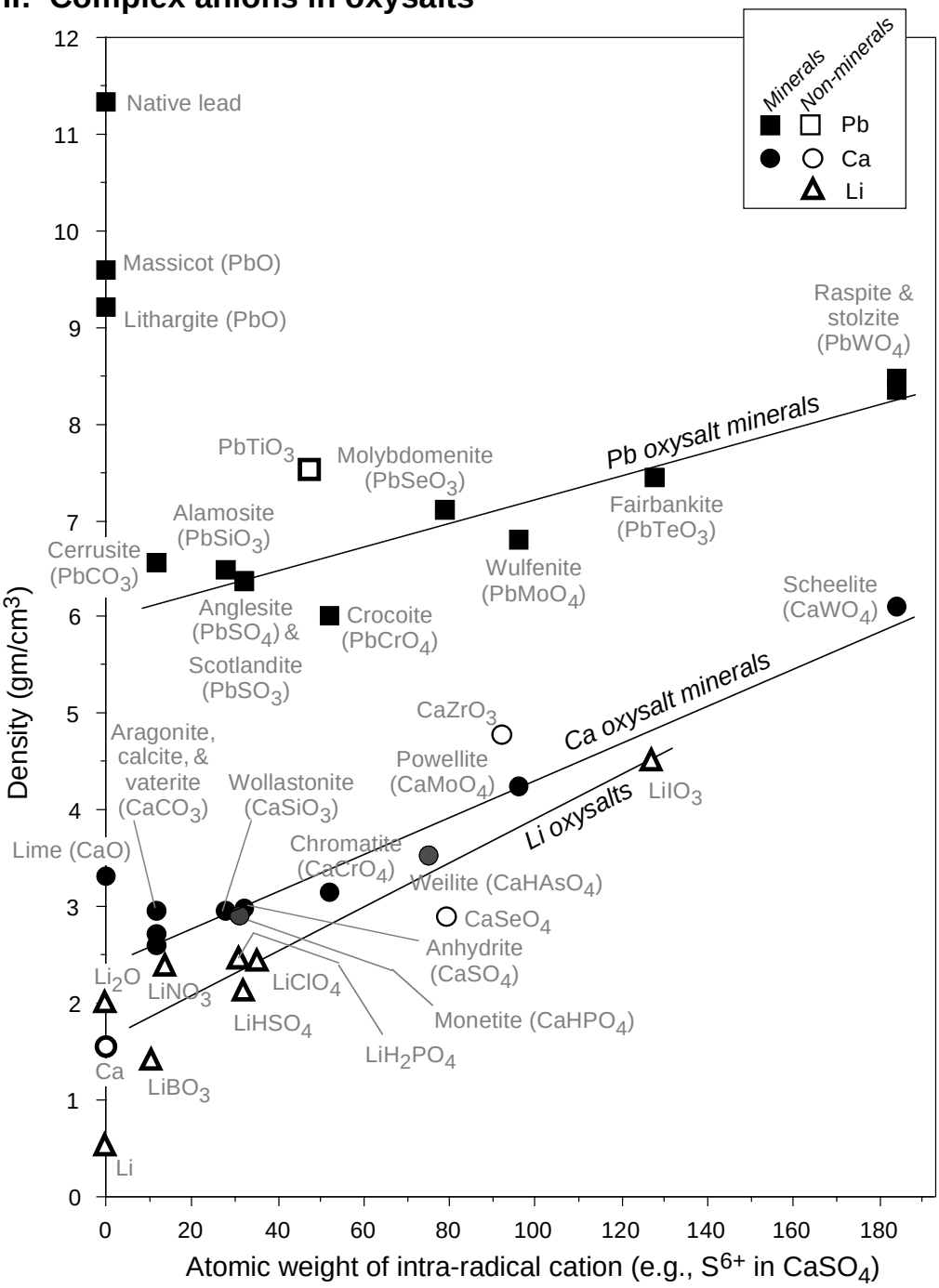
Density of minerals II: Complex anions in oxysalts

Part I of this series showed the density of carbonate minerals of various cations. Here we instead examine the density of minerals with different complex anions - not just carbonates but also nitrates, sulfites and sulfates, chromates, selenites and selenates, tellurites, and tungstates. As one might expect, density increases with atomic mass of the intra-radical cation (the three regression lines all slope upward).

One detail to note is that minerals with three O^{2-}s in their anionic radical groups commonly plot above the regresson lines and minerals with four O^{2-}s in their anionic radical groups commonly plot below the regresson lines. Thus minerals with proportionately fewer "light" O^{2-}s are more dense and minerals with proportionately more O^{2-}s are less dense, as one might expect. We'll see more about the role of O^{2-} anions in determining density of minerals in Part III of this series.



Densities of minerals shown on these pages are from Nickel and Nichols' (1991) *Mineral Reference Manual,* and densities of synthetic substances are from the *CRC Handbook of Chemistry and Physics* edited by D. Lide.