Sediment-hosted stratabound copper 20° E permissive tract Mineral zone **SWEDEN** LITHUANIA Rote Fäule BALTIC SEA Rote Fäule, Zechstein cycle I 55° N Rote Fäule, Weissleigend DENMARK Kupferschiefer near Rote Fäule with RUSSIA no signficant copper NORTH SEA Copper, with bornite and chalcopyrite **BELARUS** Copper, with chalcocite and bornite Copper Copper, zinc, lead, vanadium, and molybdenum UNITED Tennantite, with chalcopyrite and KINGDOM pyrite **NETHERLANDS** Lead and zinc, with vanadium and molybdenum Zinc **POLAND** Pyrite **BELGIUM** 50° N Pyrite, with sphalerite **GERMANY** Pyrite, with galena CZECH REPUBLIC Pyrite, with chalcopyrite UKRAINE FRANCE SLOVAKIA Vanadium and molybdenum Pre-Cenozoic rocks HUNGARY **AUSTRIA** Sand bar, no Kupferschiefer Political boundaries from U.S. Department of State (2009). 400 KILOMETERS 300 200 Lambert Conformal Conic Projection. Unmineralized Central meridian, 10° E., latitude of origin, 48° N.

200 MILES

EXPLANATION

Figure 7. Map of the Southern Permian Basin, northern Europe, showing sulfide and oxide mineral zones developed in rocks near the base of the Zechstein Group. Compiled from Richter (1941), Schumacher and Schmidt (1985), Schmidt and others (1986), Schmidt (1987), Federal Institute for Geosciences and Natural Resources (1993), Oszczepalski and Rydzewski (1997a), Rentzsch and others (1997), Geological Office of the Saxony-Anhalt Mining Area (2000), Zagorodnykh (2000), Stedingk and Rentzsch (2003), Bavarian Geological State Office (2004a), and Oszczepalski and Speczik (2011).