



Index map showing location of this ASTER hydrothermal alteration map area (red outline), bordering map areas (black outlines), and volcanic belt boundaries (white outlines).

50 25 0 NATIONAL GEODETIC VERTICAL DATUM OF 1984

APPROXIMATE MEAN DECLINATION, 2014

50 KILOMETERS

Map of Potential Porphyry Copper Sites and ASTER Hydrothermal Alteration in the South-Central Urumieh-Dokhtar Volcanic Belt, South-Central Iran

> By John C. Mars 2014

EXPLANATION [NOTE FOR PLOT USERS: Small, isolated data areas may be difficult to see on plots; see files for detail (http://pubs.usgs.gov/sir/2010/5090/o/)] Alteration units, mapped using ASTER data Phyllic-altered rocks Argillic-altered rocks Volcanic belt boundary • Potential porphyry copper site

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Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) hydrothermal alteration data was used to map alteration interpreted as potential porphyry copper sites. See appendix B table (available online only at http://pubs.usgs.gov/sir/2010/5090/o/) for physical characteristics and locations of potential porphyry copper sites, listed by site number.

Any use of trade, product, or firm names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. Government This map was printed on an electronic plotter directly from digital files. Dimensional calibration may vary between electronic plotters and between X and Y directions on the same plotter, and paper may change size due to atmospheric conditions; therefore, scale and proportions may not be true on plots of this map. For sale by U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225, 1–888–ASK–USGS Digital files available at http://pubs.usgs.gov/sir/2010/5090/o/ Suggested citation: Mars, J.C., 2014, Map of potential porphyry copper sites and ASTER hydrothermal alteration in the south-central Urumieh-Dokhtar volcanic belt, south-central Iran, *plate 9 in* Mars, J.C., 2014, Regional mapping of hydrothermally altered igneous rocks along the Urumieh-Dokhtar, Chagai, and Alborz Belts of western Asia using Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) data and Interactive Data Language (IDL) logical operators—A tool for porphyry copper exploration and assessment: U.S. Geological Survey Scientific Investigations Report 2010–5090–0, 36 p., 10 plates, and spatial data, available at *http://dx.doi.org/10.3133/sir201050900*.