

## **Copper Triangle Pilot Project: Enhancing Opportunities for Geoscience Studies and Careers in a Culturally Diverse, Underserved Rural Mining Area**

The *Copper Triangle Pilot Project* (CTPP) is an NSF Opportunities for Enhancing Diversity grant project (GEO-1108044) underway since 2012. CTPP is a partnership among Arizona State University, Central Arizona College (CAC), a rural high-need school district (Superior Unified School District) and local industry (Resolution Copper Mining Company) to develop a research-based, sustainable pathway to baccalaureate degrees and careers in the Earth and environmental sciences for underrepresented minority students (mostly Hispanic and Native American) who reside in an underserved rural mining area (the “Copper Triangle”) of central Arizona. CTPP is directed toward a type of geographic and demographic region not commonly served by other programs to promote equity and diversity: a rural community with a population that is more than 50% underrepresented minorities, and historically dependent on the extraction of natural resources. The interlinked components of CTPP, informed by current research on the most effective practices for minority-student recruitment and retention in the Earth sciences comprise an effective stakeholder partnership, concurrent-enrollment college geology courses (offered by CAC) for high-school students and community members, an articulated academic program from high school to the B.S. and B.A., regional summer STEM internships, mentoring and support, and embedded teacher professional development. The Earth science curriculum is richly place-based (situated in Southwest landscapes, geologic phenomena, resources, and environmental issues) and informed by the diverse cultures and history of the local community. Each component is formatively and summatively assessed using mixed methods. The project, underway since fall 2012, has received endorsement and support from all community stakeholders and is expected to be sustained beyond the term of the NSF grant with regularly scheduled course offerings, continued support by the mining firm, and by the economic diversification and growth of the community and region catalyzed by the new mine.