Introduction

This is one of a series of earth fissure maps prepared by the Arizona Geological Survey (AZGS) in accordance with Ariz. Rev. Stat. § 27-152.01(3). AZGS collected location information from previously conducted earth fissure studies, reviewed available remote-sensing aerial and satellite imagery, and conducted surface site investigations throughout the study area. A reasonable effort was made to identify all earth fissures in the study area. Nonetheless, some fissures may remain unmapped as a result of one or more of the following:

1) Existing fissures may have been masked by construction or agricultural activities.
2) Incipient fissures may lack clear surface expression.
3) The surface expression of fissures changes constantly as new earth fissures develop and old earth fissures fill in. A blank area on the map does not guarantee that earth fissures are not present. However, blank areas within the study area boundary have been investigated, and no surface evidence of fissures was found as of the date of map publication. Determining the presence or absence of a fissure at any specific site may require additional mapping and/or geotechnical analysis.

Air photo base compiled from 2015. 1 meter NAIP (National Agriculture Imagery Program) digital ortho imagery.
Transportation network dataset compiled by Arizona State Lands Dept. by combining the 2007 County Road Data of Maricopa, Pima, Pinal and Cochise Counties with the Census 2000 TigerLine Data of the remaining Counties.
Shaded relief basemap produced from 10m NED Digital Elevation Model

MAP LEGEND
- Red lines represent the location of continuous earth fissures manifested as open cracks or gullies.
- Orange lines represent the location of discontinuous earth fissures manifested as elongated or circular depressions or as abbreviated or irregular linear depressions. These discontinuous surface features frequently represent an incipient surface expression of an earth fissure.
- Yellow lines represent the location of fissures confirmed by non-AZGS personnel or clear evidence of earth fissures on aerial imagery. Traditional field investigation of these features by AZGS was hindered by agricultural or urban modification of the land surface.
- Green lines represent the approximate locations of unconfirmed earth fissures, defined as fissures which could not be confirmed by surface investigations by AZGS geologists, but which have been previously reported by Professional Geologists in published documents or reports.
- The outline of the Study Area is shown in blue. The limits of the study area are based on interpretation of aerial and satellite imagery and combined surface site investigations provided by the Arizona Department of Water Resources. Historical and modern aerial photos taken within this area were used for anomalous features. These lines were then investigated in the field to determine if there was any evidence of earth fissures.

References

NAIP Orthoimagery (1-Meter GSD), 2017, USDA-FSA-AFPO Aerial Photography Field Office, Salt Lake City, Utah.