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PALEOSPRINGS OR PALEOLIQUEFACTION FEATURES? LAS VEGAS VALLEY, NEVADA

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ABSTRACT: Features historically referred to as extinct spring conduits are commonly encountered during geotechnical and geologic investigations in the Las Vegas Valley, Nevada. Most of these geologic features are found in the northern part of the valley and in the proximity of Quaternary fault scarps. Some of these features are obviously springs with historical flow and accompanying spring-related vegetation (mesquite and/or cottonwood trees) and nearby surficial deposits containing organic debris. However, some features have been encountered which are apparently Pleistocene in age, and although they have similar appearances to spring conduits in exploration trenches, it has been speculated they could be paleoliquefaction features, specifically sand blows and dikes. One such feature was well documented in North Las Vegas. This paper will describe this sand-filled linear feature and explore its origin by comparison to known spring conduits and liquefaction induced sand dikes. If the evidence points to a liquefaction origin, this will have implications of the seismic hazard in the Las Vegas region.