INTRODUCTION

The Argyle Quadrangle lies within the Southern Iowa Drift Plain (Till plains) region, which is dominated by late-glacial till plains in the uplands and fine- to medium-grained alluvial deposits in stream valleys. The thickness of Quaternary materials overlying the bedrock surface varies widely across the quadrangle ranging from 30 (100 ft) to 180 m (600 ft) in the southeastern part of the mapping area. An accompanying map of the vertical geology of the Argyle Quadrangle has been published separately with this map (Map Fm 32-4, Thomas et al., 2001).

The bedrock surface of the Argyle Quadrangle is dominated by Mississippian strata overlain by Pannonian strata that occur in minor erosionally cut-out strata. The majority of the bedrock exposures were found along Middle Creek which forms part of this mapping area. Although it is recognized that there are field exposures along the Bluffs of the Des Moines River valley, that portion of the mapping area was inaccessible. Geologic reconstructions of key abandoned streams and their exposed beds were evaluated during field investigation. There are few abandoned streams and cut-out strata within the mapping area. Additional subsurface information was derived from the analyses of more than 200 water well records, 18 of which were cutting samples that were described as part of the mapping project, and 23 points seismic data points. For a more detailed account of data sources, mapping methods, and stratigraphy of the Argyle Quadrangle, please refer to the Summary Map Report.