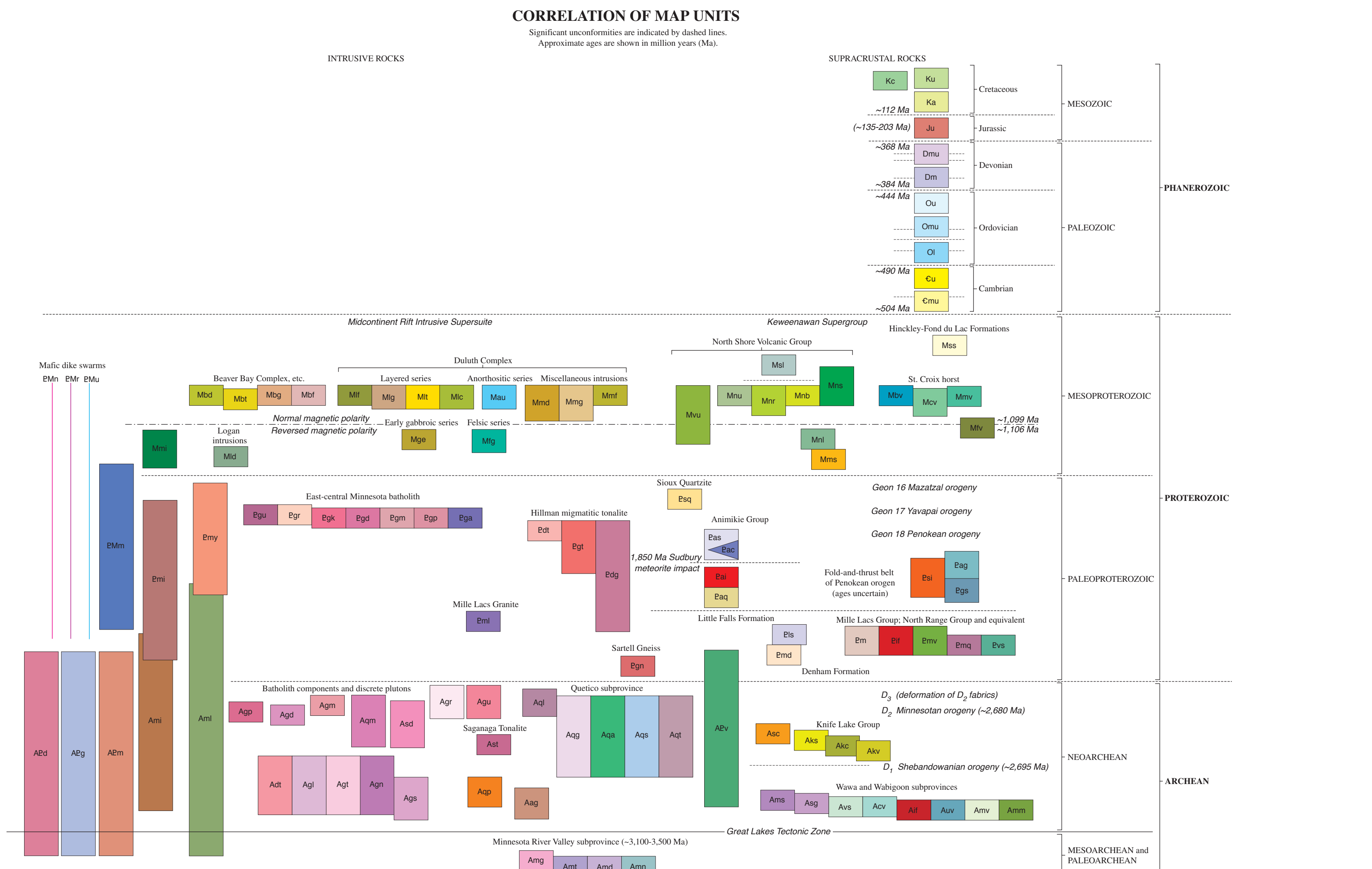
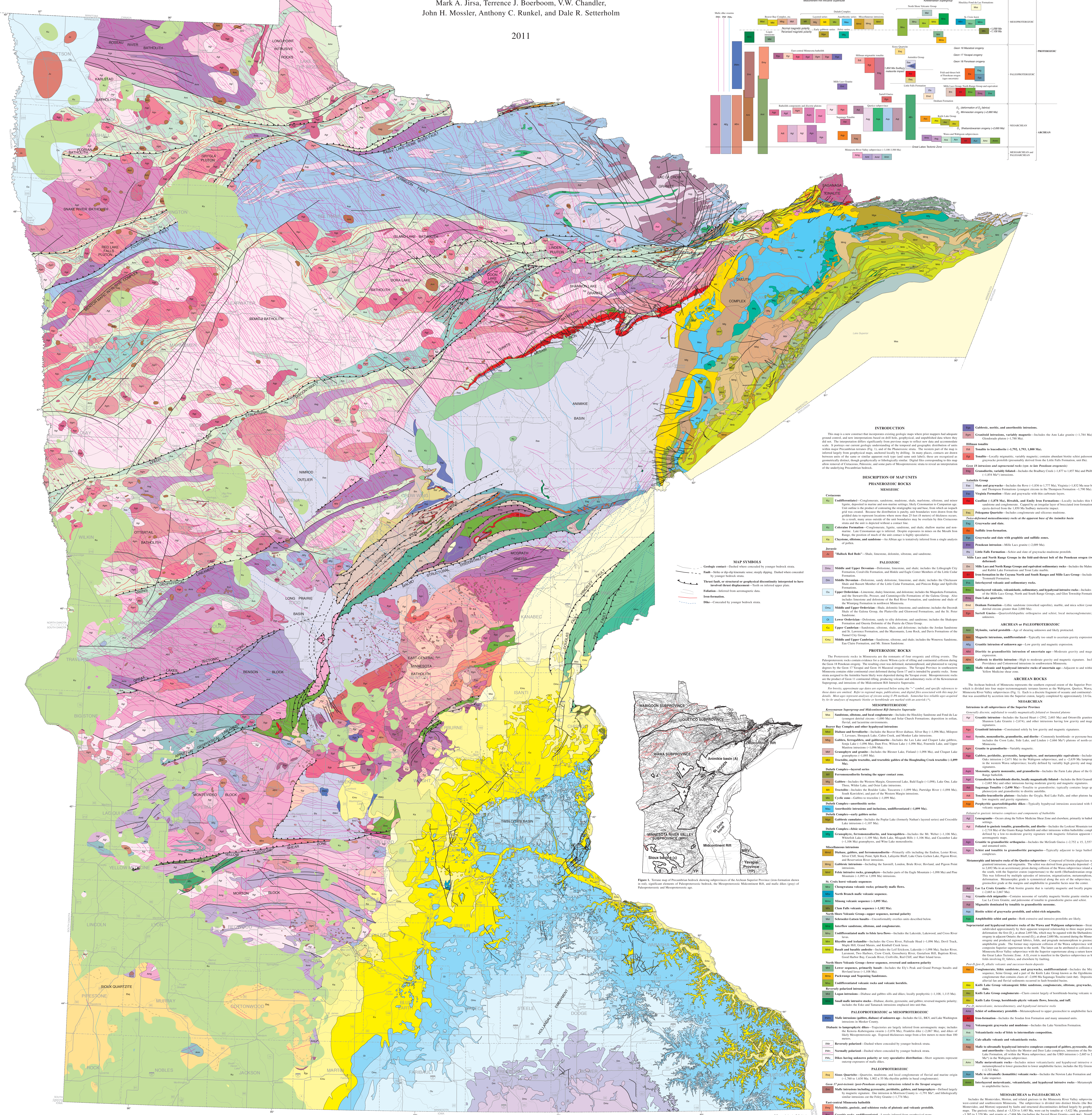


GEOLOGIC MAP OF MINNESOTA BEDROCK GEOLOGY

Compiled by

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2011



INTRODUCTION

This map is a new revision that incorporates existing geologic maps whose prior purposes had adequate general content, and new interpretations based on field data, geophysical, and stratigraphic data where they did not. The interpretation differs significantly from previous maps in rock unit distribution and nomenclature. It portrays new geologic units, and redefines old units, and geographic distribution of units within major tectonic provinces (Fig. 1), and of the Proterozoic. The western part of the map is inferred largely from geophysical maps, and locally by drilling. In many areas, contacts are drawn between units of the same or similar apparent rock type (and same unit label), these are recognized as geographically distinct, though geologically uncorrelated by drilling. Dotted lines corresponding to the map also extend of Cassia, Polk, and some parts of Mesoproterozoic strata to an interpretation of the underlying Proterozoic bedrock.

DESCRIPTION OF MAP UNITS

PHANEROZOIC ROCKS

CRETACEOUS

- Chickadee**—Conglomerate, sandstone, and shale, includes the Chickadee, and minor lignite, deposited in marine and non-marine settings; likely Cretaceous in Campanian age. Lies within the province of convergent tectonics; topographic map and base map which are overlain by this unit are in places of convergent tectonics. In many areas, contacts are drawn between units of the same or similar apparent rock type (and same unit label), these are recognized as geographically distinct, though geologically uncorrelated by drilling. Dotted lines corresponding to the map also extend of Cassia, Polk, and some parts of Mesoproterozoic strata to an interpretation of the underlying Proterozoic bedrock.
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PALEOZOIC

DEVONIAN

- Devil**—Sandstone, shale, and limestone, includes the Devil, and minor lignite, deposited in marine and non-marine settings; likely Devonian in age. Lies within the province of convergent tectonics; topographic map and base map which are overlain by this unit are in places of convergent tectonics. In many areas, contacts are drawn between units of the same or similar apparent rock type (and same unit label), these are recognized as geographically distinct, though geologically uncorrelated by drilling. Dotted lines corresponding to the map also extend of Cassia, Polk, and some parts of Mesoproterozoic strata to an interpretation of the underlying Proterozoic bedrock.

MESOPROTEROZOIC

NEOARCHAIC

- Granite**—Granite, and minor gneiss, includes the Granite, and minor gneiss, deposited in a variety of tectonic settings; likely Neoarchaean in age. Lies within the province of convergent tectonics; topographic map and base map which are overlain by this unit are in places of convergent tectonics. In many areas, contacts are drawn between units of the same or similar apparent rock type (and same unit label), these are recognized as geographically distinct, though geologically uncorrelated by drilling. Dotted lines corresponding to the map also extend of Cassia, Polk, and some parts of Mesoproterozoic strata to an interpretation of the underlying Proterozoic bedrock.

ARCHAIC

- Granite**—Granite, and minor gneiss, includes the Granite, and minor gneiss, deposited in a variety of tectonic settings; likely Archaean in age. Lies within the province of convergent tectonics; topographic map and base map which are overlain by this unit are in places of convergent tectonics. In many areas, contacts are drawn between units of the same or similar apparent rock type (and same unit label), these are recognized as geographically distinct, though geologically uncorrelated by drilling. Dotted lines corresponding to the map also extend of Cassia, Polk, and some parts of Mesoproterozoic strata to an interpretation of the underlying Proterozoic bedrock.