

- EXPLANATION**
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|--|---|--|--|--|---|--|---------------------|
| | Shallow-marine sandstone -- delta front and shoreface | | Coal -- lettering scheme follows Lupton, 1916 | | Section expanded to show original thickness of coal | | Trough crossbedding |
| | Open-shelf marine sandstone | | Carbonaceous shale | | Granule-size grains | | Ripple lamination |
| | Siltstone | | Zone of discontinuous coal beds and carbonaceous shale | | Shell layer | | Burrows |
| | Shale | | Ash produced by burning of coal | | Ironstone concretions | | Roots |

DISCUSSION

The Ferron Sandstone Member of the Mancos Shale (Late Cretaceous, late Turonian) consists of five stacked deltaic sequences that are exposed on the west flank of the San Rafael Swell in central Utah (Ryer, 1980). This cross section establishes the stratigraphic framework for the Ferron in the area of the Emery coal field and illustrates the relationships between the five deltaic cycles of sedimentation and the major coal beds of the Emery field. The delta-front sandstone units of the Ferron have been assigned numbers in ascending stratigraphic order. The coal beds are designated by letters of the alphabet, following the scheme proposed by Lupton (1916), where possible (see Ryer, 1981, for a discussion of the limitations involved in using Lupton's designations of coal beds in the Emery field). Also shown are two sandstone units that extend northward beyond the limits of the deltaic facies in exposures of the Ferron Sandstone Member in the northern part of Castle Valley. These units record deposition of sand and silt in an open-shelf marine paleoenvironment prior to the northward advance of deltaic sedimentation and have been informally named the Clawson and Washboard units by Cotter (1975a, b).

The cross section incorporates 25 measured outcrop sections, plus data from six holes (DH on the cross section) drilled by the Consolidation Coal Company. Because of the proprietary nature of the drillhole data, the locations of the holes are not shown on the index map. The general trend of the cross section, which approximately parallels the structural strike of the area, is oriented at a high angle to the depositional strike of the deltaic facies of the Ferron, the paleoshoreline having been oriented in a northwesterly direction. Landward is toward the left on the cross section; seaward is toward the right.

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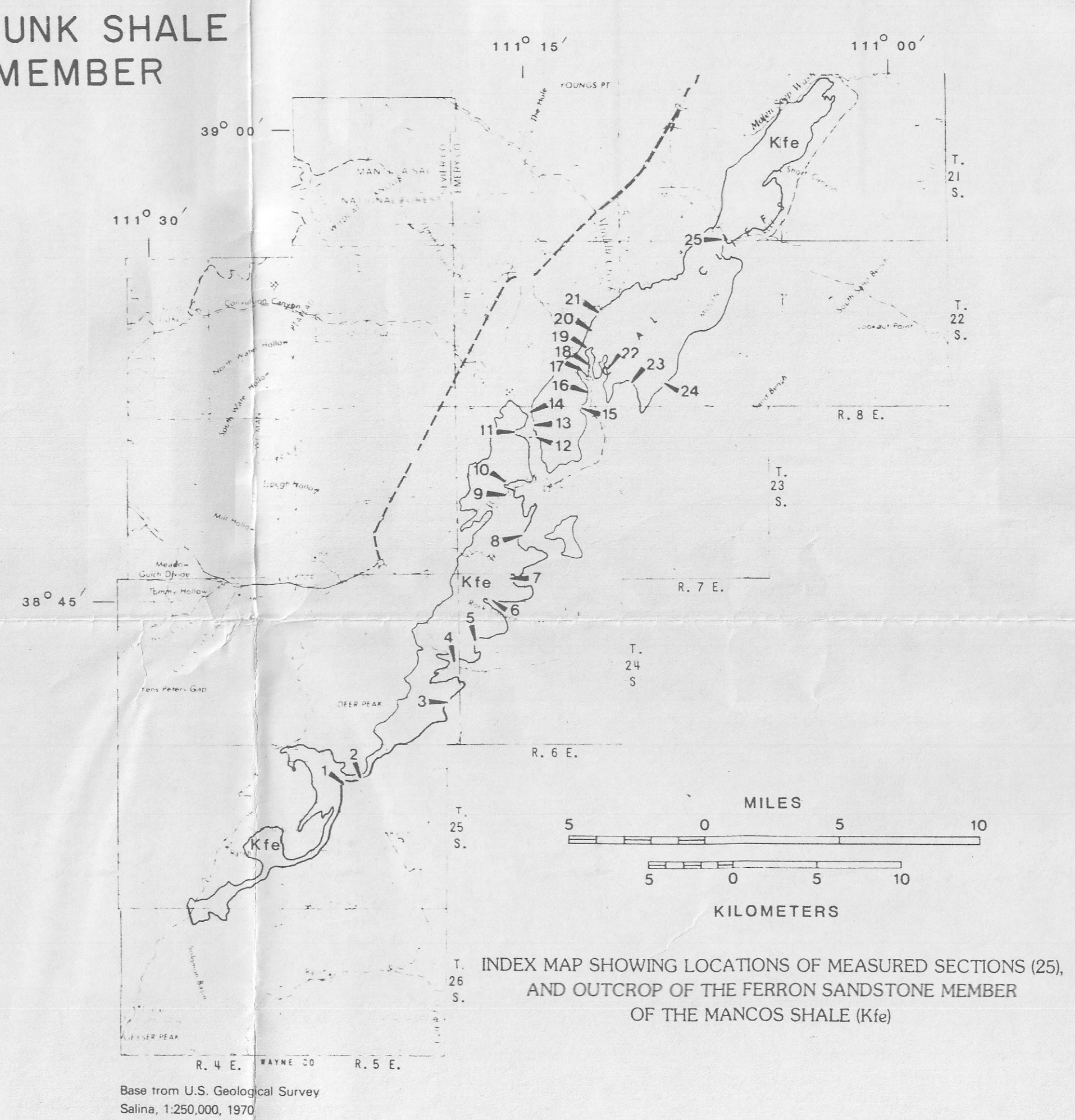
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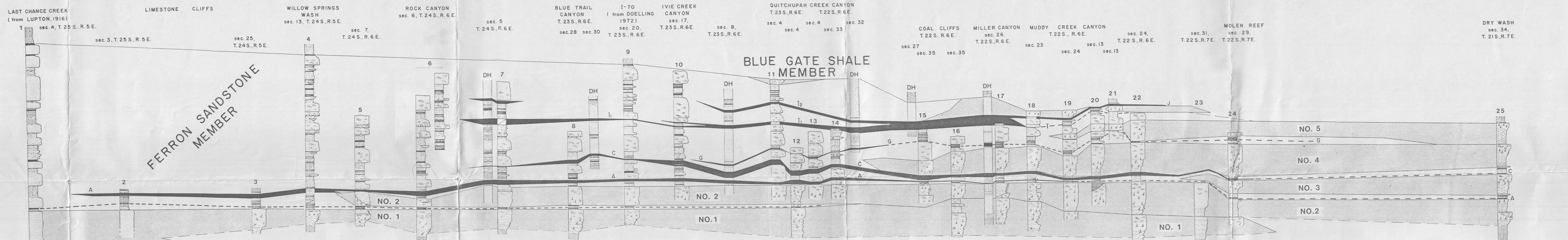
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CROSS SECTION OF THE FERRON SANDSTONE MEMBER OF THE MANCOS SHALE IN THE EMERY COAL FIELD, EMERY AND SEVIER COUNTIES, CENTRAL UTAH

By
Thomas A. Ryer
1981



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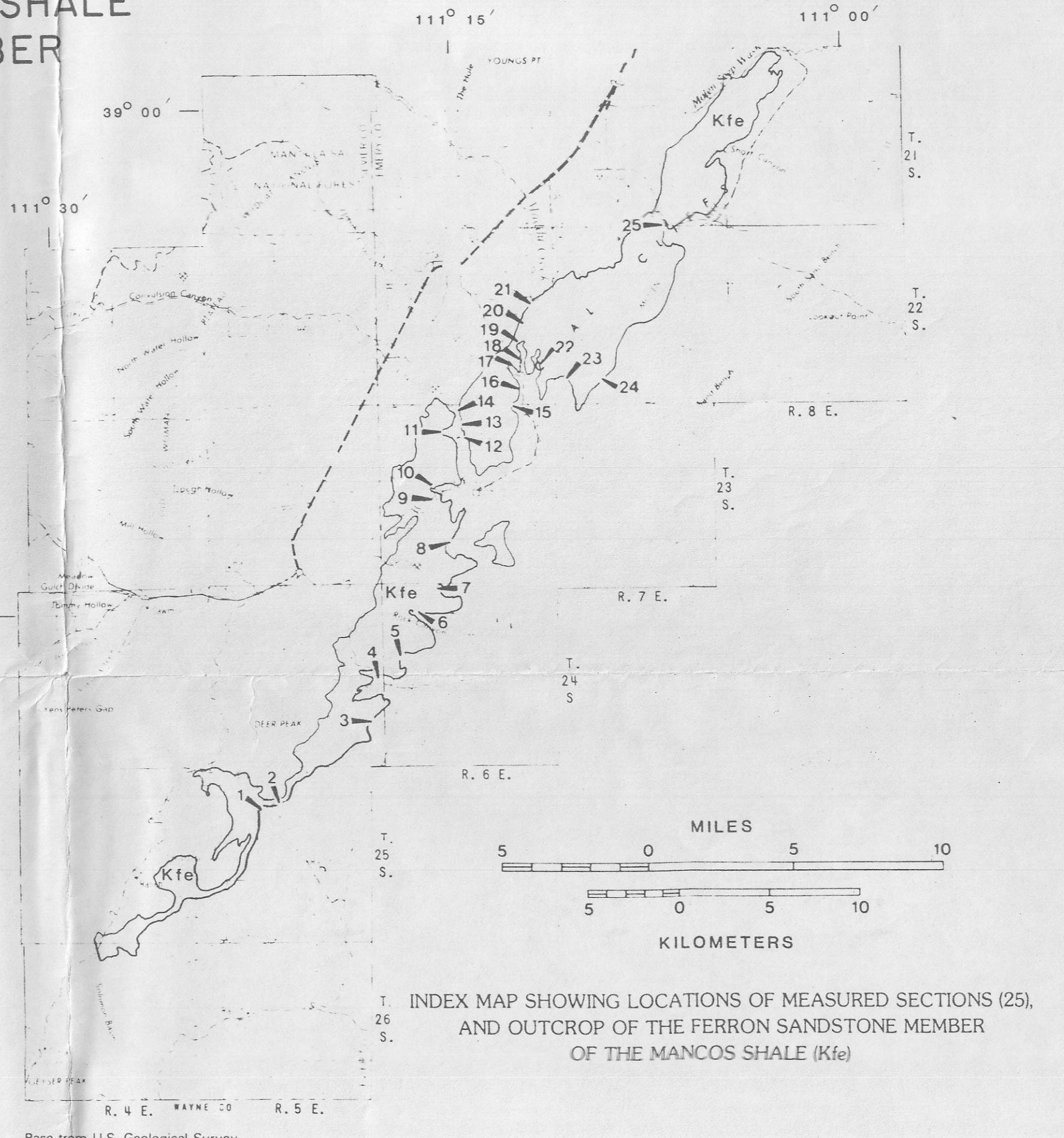
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TUNUNK SHALE MEMBER



INDEX MAP SHOWING LOCATIONS OF MEASURED SECTIONS (25) AND OUTCROP OF THE FERRON SANDSTONE MEMBER OF THE MANCOS SHALE (Kfe)

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