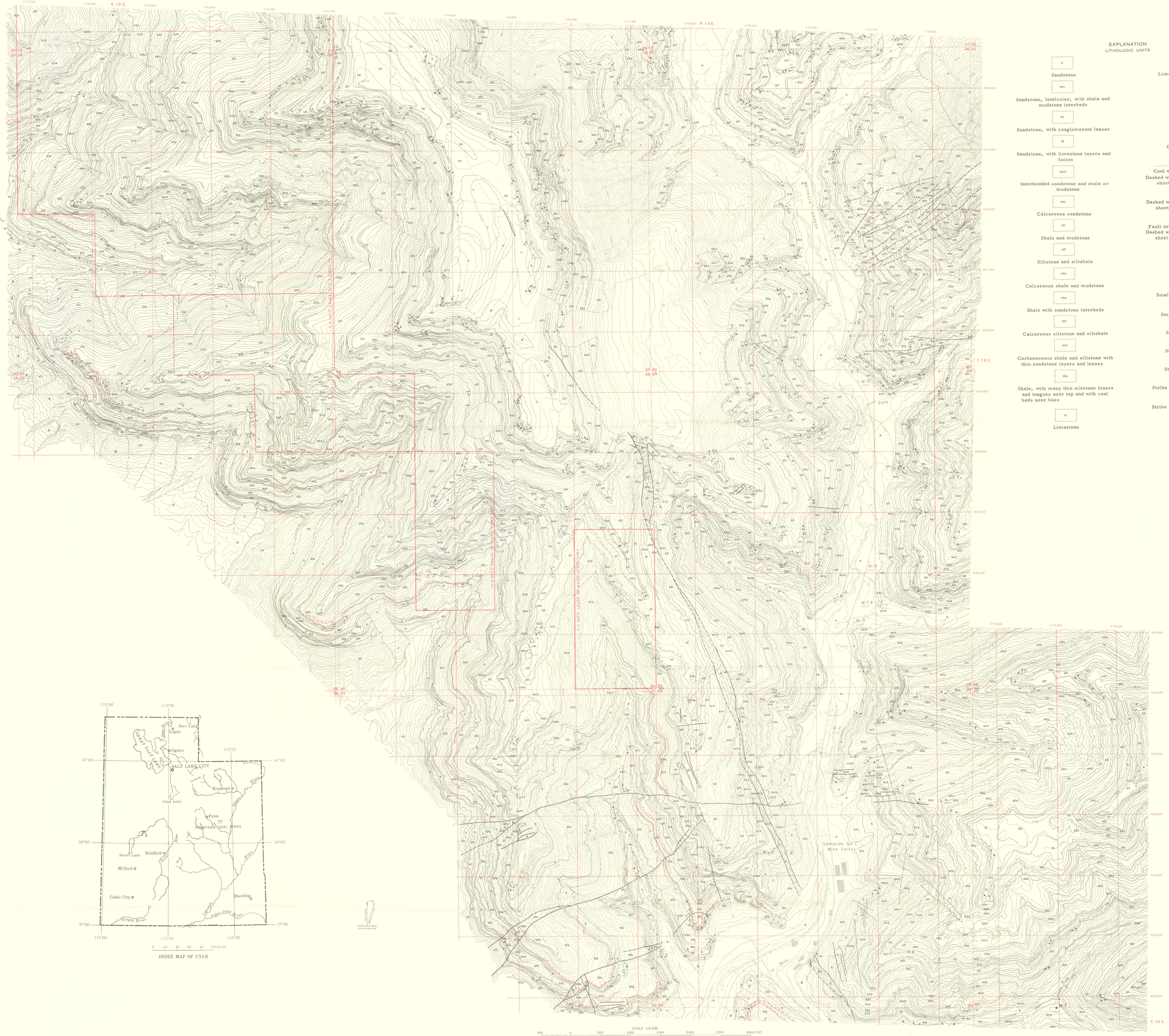
PREPARED IN COOPERATION WITH
THE U. S. BUREAU OF MINES



EXPLANATION

LITHOLOGIC UNITS

- s — Sandstone
- sm — Sandstone, lenticular, with shale and mudstone interbeds
- sc — Sandstone, with conglomerate lenses
- sl — Sandstone, with limestone layers and facies
- ssm — Interbedded sandstone and shale or mudstone
- ssc — Calcareous sandstone
- sh — Shale and mudstone
- slt — Siltstone and siltshale
- shc — Calcareous shale and mudstone
- shs — Shale with sandstone interbeds
- stc — Calcareous siltstone and siltshale
- scs — Carbonaceous shale and siltstone with thin sandstone layers and lenses
- sls — Shale, with many thin siltstone lenses and tongues near top and with coal beds near base
- ls — Limestone
- lsi — Limestone, impure, sandy
- c — Colluvium
- a — Alluvium
- g — Gravel and boulders

Coal outcrop — Coal outcrop, clinkered

Dashed where approximately located, short dashed where inferred

Contact
Dashed where approximately located, short dashed where inferred

Fault or fracture zone showing dip
Dashed where approximately located, short dashed where inferred

Vertical fault

Fault zone

Small shear zone showing dip

Small vertical shear zone

Strike and dip of beds

Strike and dip of joints

Strike of vertical joints

Strike and dip of cleavage in coal

Strike of vertical cleavage in coal

INDEX MAP OF UTAH

PRELIMINARY LITHOLOGIC AND STRUCTURAL MAP OF SUNNYSIDE NO. 1 MINE AREA, CARBON COUNTY, UTAH, SHOWING COAL OUTCROPS

By
Frank W. Osterwald
1962

Base prepared from surveys by Kaiser Steel Corp., U. S. Steel Co., and U. S. Geological Survey. Topography by K. L. Hoy, U. S. Geological Survey. Underground coal mine workings from maps by Kaiser Steel Corp., posted to Jan. 1, 1960. Coordinate system established about 1900, by Utah Fuel Co., from origin south and west of map area

Geology by F. W. Osterwald, assisted by R. E. Eggleton, 1958–59, and Harold Brodsky, 1959–60

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—61325

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