Mine Station

Bear Canyon Station

Motor Road Extension

SUNNYSIDE NO. 1 MINE

Pasture Canyon Recording Station

SUNNYSIDE NO. 3 MINE

Approximate position of base of Sunnyside coal seam

SUNNYSIDE NO. 2 MINE

ROCK TUNNEL

SUNNYSIDE FAULT ZONE

Approximate position of base of Sunnyside Coal Seam

COLUMBIA MINE

SUBSURFACE FAULT

Horse Canyon Station

Sheep Canyon Station

GENEVA MINE

TIPPLE

BELT CONVEYOR

Book Cliffs Coal Co.

EXPLANATION

SEISMIC NETWORK

Basic seismometer station

Supplementary station

Central recording station and tiltmeter

HYPOCENTER LOCATIONS

2.1–3.0 1.6–2.0 1.0–1.5
Magnitude (Richter)

FIRST MONTH 0-2 2-4 4-6 SECOND MONTH
SEA LEVEL + 0 -
THIRD MONTH 0-2 2-4 4-6

Pie segment indicates range of focal depth, above or below sea level, in thousands of feet
Ring segment indicates first or second half of month

MINES

Haulageways and bleeders

Mine portal

(1) (2)
(1) Mined-out area or coal
(2) Coal mined this quarter

GEOLOGY

U
D
Fault at surface

U
D
Fault at mine level

NOTE: U, upthrown side; D, downthrown side. Divergence between faults at mine level and faults at surface due to relief and modercte dip of fault plane.

Flat Station

Base from U.S. Geological Survey Sunnyside (1915 reprinted 1948), Woodside (1948), Range Creek (1954), and Flat Canyon (1954) quadrangles, 1:62,500
United States Steel Corp. reference grid (in thousands of feet)
Haulageways and bleeders of the mine workings shown compiled from Kaiser Steel Corp., United States Steel Corp., and Book Cliffs Coal Co. mine maps

Geology compiled from maps of the Sunnyside district (Osterwald, 1961), Columbia mine area (Osterwald, Danrud and Maberry, in press), and Geneva mine area (C. H. Danrud and B. K. Barnes, 1963-65).

15°
APPROXIMATE MEAN DECLINATION, 1969

0 2000 4000 6000 8000 10,000 FEET
SCALE 1:24,000

Figure 3.--Map of the Sunnyside Mining District, Utah, showing topography, faults, coal outcrops, major mine workings, and tremor hypocenters (map position and focal depths) for the period January through March 1967