E42000
N60000
E43000
N61000
MINED OUT
Main Hoist
Motor Road Raises
Violent bumps during driving of entry
Numerous small bumps aided driving of entry
Raise
Parting
Violent bumps during driving of entry
Numerous small bumps aided driving of entry
Motor Road Extension
Abandoned Beltway
Pyrite
Main Parting
Main Motor Road
Motorman's Shelter
3250 ft to portal
MASSIVE SILTSTONE ROOF
1st Left
Area of figure 18
10.1 m (33 ft)
Right-side Airway (open pit)
Right-side Manway
Left-side Manway
Left-side Airway (hoisting shaft)
SUNNYSIDE FAULT ZONE
1st Right
2nd Left
Area of figure 24
2nd Right
Rider Coal 2" thick moved out against roof bolts 10" above floor
1.4 m (4.5 ft)
0.4 m (1.2 ft)
4th Left
3rd Right
MINED OUT By 1964
4th Right
5th Left
Caved
Arch roof
Caved Siltstone
5th Right
6th Left
Barrier Pillar
7th Left
6th Right
Machine shop
Massive jointed coal
Stopes
8th Left
Area of figure 7
Track Entry
7th Right
9th Left
Powder and Pyrite
Coal
8th Right
Haulageway
<⅓ Vitrain
Post-mine movement
10th Left
9th Right
Mine
50% Vitrain
11th Left
10th Right
12th Left
LEFT-SIDE BLEEDER SLOPES
RIGHT-SIDE BLEEDER SLOPES
MAIN SLOPES
MAIN SLOPES
N

EXPLANATION

- Strike of fault or fracture, with dip where shown—Dashed where inferred. Bar and ball on downthrown side
- Fault in floor
- Floor anticline—Dashed line indicates broken crest of anticline. Short lines indicate direction from which compressive stress is directed
- Trough and direction of plunge of roof syncline
- Strike and dip of beds
- Strike and dip of simple cleavage
- Strike of vertical simple cleavage
- Strike and dip of spotted cleavage "eye coal" with 0.5 ft diameter spots
- Strike and dip of vertical spotted cleavage "eye coal" with 0.5 ft diameter spots
- Strike and dip of spotted cleavage "eye coal" with 0.15 ft diameter spots
- Plunge of lineation
- Strike and dip of joint in roof
- Strike of vertical joint in roof
- Strike and dip of joint in rib
- Strike of vertical joint in rib
- Strike and dip of shatter (fracture) zone
- Strike of vertical shatter (fracture) zone
- Fracture with plunge of slickensides
- Fracture with directions of horizontal movements
- Curved shear fracture, dip steepens downward from roof, with dip where shown
- Conjugate fractures
- Bedding-plane shear—Sawteeth on underthrust side
- Parallel, cymoid-shaped fractures, with dip where shown, flattens downward from roof
- Curved shear fracture in rib, projected upward to roof
- Smooth cylindrical fractures in coal—Fractures form either right handed or left handed spirals as indicated by looped arrows. Loops are dashed when direction of spiral is not definitely known
- Inferred directions of movement in deformed coal—Length of arrow is proportional to amount of movement
- Debris resulting from rock burst
- Outline of mine workings where mapped for this investigation
- Outline of mine workings where adopted from company maps, posted to Jan. 1, 1965—Crossbars with barb indicate carved workings
- Small square pillars
- Pillars oriented nearly parallel to vertical fracture zones
- Pillars oriented parallel to dip direction of coal
- Deformed roof bolt
- Vertical shaft
- Back-filled mine opening
- Concrete stopping with door
- Concrete stopping or squeeze-seal
- Regulator
- Structual features of pre-min age

Land coordinate system from Kaiser Steel Corp.—established about 1900 by Utah Fuel Co., from a zero point south and west of Sunnyside Utah. Datum for sections is floor of mine.

0 200 400 600 800 FEET
0 100 200 METER

Geology by F.W. Osterwald, 1958–1960, assisted by R.E. Eggleston, 1958 and Harold Brodsky, 1959–1960

UNDERGROUND ENGINEERING GEOLOGIC MAP OF PART OF SUNNYSIDE NO. 1 MINE, CARBON COUNTY, UTAH

By
F.W. Osterwald and C.R. Dunrud

1993