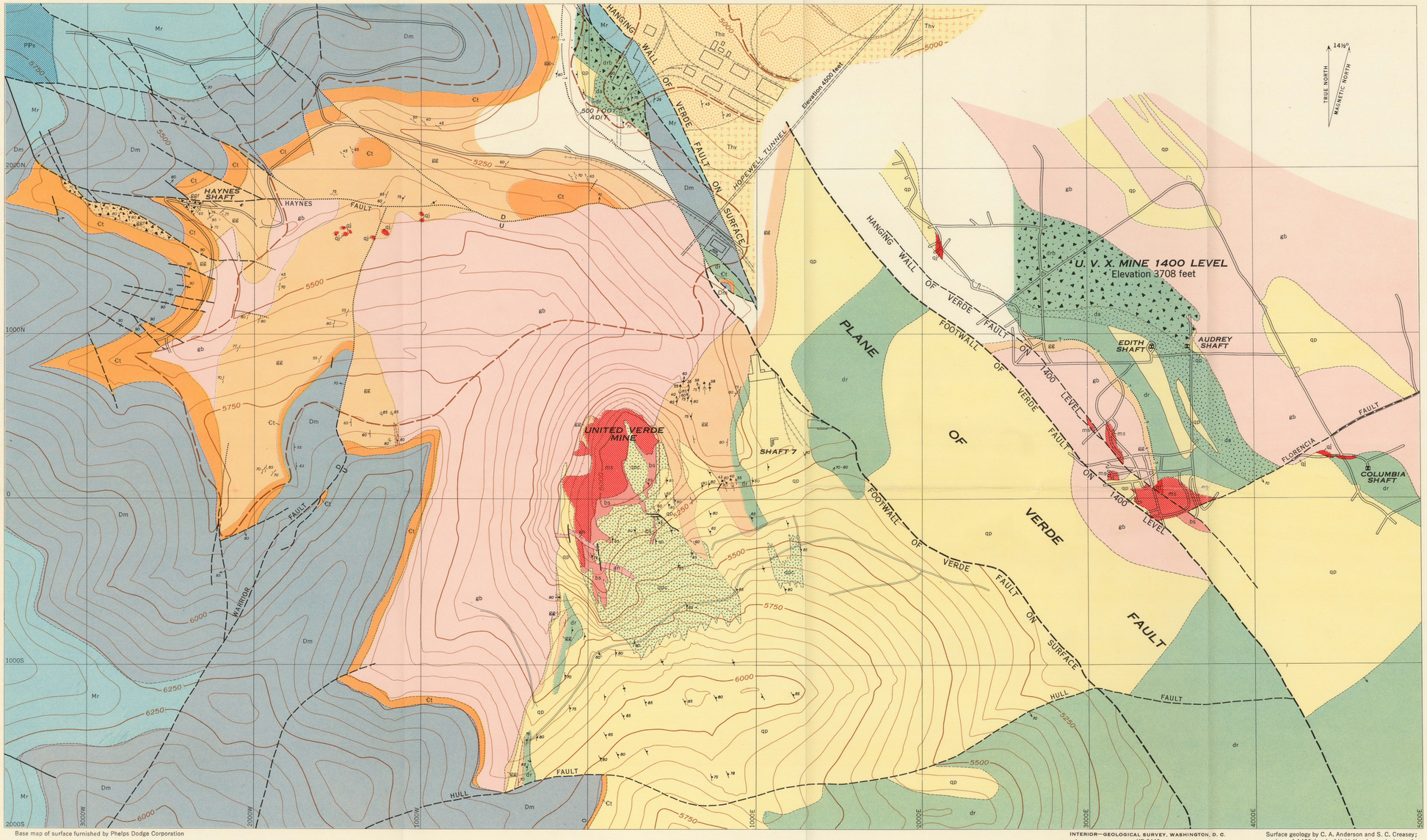
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PROFESSIONAL PAPER 308 PLATE 5



Base map of surface furnished by Phelps Dodge Corporation

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.
MR 0449

Surface geology by C. A. Anderson and S. C. Creasey; geology of 1400 level of U. V. X. mine and plane of Verde fault by G. W. H. Norman

SURFACE MAP OF UNITED VERDE MINE, PLANE OF VERDE FAULT, AND 1400 LEVEL, UNITED VERDE EXTENSION MINE, YAVAPAI COUNTY, ARIZONA

200 0 1000 Feet
Contour interval 20 feet
Datum is mean sea level

EXPLANATION

TERTIARY

Pliocene(?)

Ths / Thv — Hickey formation
Lava, Thv; *gravel,* Ths

UNCONFORMITY

PENNSYLVANIAN AND PERMIAN

PPs — Supai formation

UNCONFORMITY

MISSISSIPPIAN

Mr — Redwall limestone

UNCONFORMITY

DEVONIAN

Middle(?) and Upper Devonian

Dm — Martin limestone

UNCONFORMITY(?)

CAMBRIAN

Ct — Tapeats sandstone(?)

UNCONFORMITY

OLDER PRECAMBRIAN

an — Andesite dikes

gb — Gabbro

qp / qpc — Quartz porphyry
Chloritized quartz porphyry, qpc

Ash Creek group

ggr / gg — Grapevine Gulch formation
Tuffaceous sedimentary rocks, gg; *intercalated rhyolite breccia,* ggr

drb / dr / da — Deception rhyolite
Rhyolitic flows, dr; *rhyolitic breccia,* drb; *intercalated andesitic flows,* da

PRODUCTS OF ALTERATION AND METALLIZATION

bs — Black schist

ms — Massive sulfide

qj — Quartz and jasper

Contact, showing dip
Dashed where approximately located, dotted where concealed

U / D — Fault, showing dip
Dashed where approximately located; U, *upthrown side;* D, *downthrown side*

Vertical fault

Probable fault
Dotted where concealed

Plunge of minor anticline

Plunge of minor syncline

Strike and dip of beds

Strike and dip of beds
Direction that top of bed faces is unknown

Strike and dip of overturned bed

Strike of vertical beds

Strike and dip of foliation

Strike of vertical foliation

Bearing and plunge of lineation

Strike and dip of foliation and plunge of lineation

Strike of vertical foliation and plunge of lineation

Shaft, above and below levels

Outline of area covered by dump

Note: Prior to the Tertiary displacement on the Verde fault, the 1400 level of the United Verde Extension mine was contiguous with the approximate present surface (300-foot level) of the United Verde mine. To help present the Precambrian structural relations, both are shown on this map