UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HOUCK QUADRANGLE
ARIZONA—APACHE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

4154 IV NE (PINE SPRINGS) | 4154 I NW (URANIUM SPRING) | 4154 I NE (SURRENDER CANYON)

109°15′ | 109°07′30″ | 35°22′30″

R. 29 E. | 12′30″ | R. 30 E. | 10′ | 800 000 FEET

T. 23 N. | T. 22 N. | T. 21 N.

NAVAJO INDIAN RESERVATION

Black Creek | Puerco River | Whitewater Arroyo

Houck | Allentown | Navajo Joe Spring | Tolakwitha Mission | Spencers Well | Water Tank | Well | Rest Area | Borrow Pits | Cem | Good News Mission | Big Arrow Trading Post | Hance

JEEP TRAIL | OLD RAILROAD GRADE | ATCHISON TOPEKA AND SANTA FE | 2 LANE | 666 | 40

4154 IV SE (BURNTWATER WASH) | 4154 I SE (LUPTON) | 4154 II NE (CHAPIN WELL) | 4154 II NW (TOLAPAI SPRING) | 4154 I NW (SANDERS)

LUPTON EXIT 6 MI. GALLUP, N. MEX. 28 MI. | HOLBROOK 60 MI. SANDERS EXIT 6 MI.

1 590 000 FEET | 1 550 000 FEET | 780 000 FEET

35°22′30″ | 35°15′ | 109°15′ | 109°07′30″

20′ | 17′30″ | 10′

Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1969–70. Field checked 1971

Projection and 10,000-foot grid ticks: Arizona coordinate system, east zone (transverse Mercator)
1000-metre Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines

Certain land lines are omitted because of insufficient data

UTM GRID AND 1971 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

GN | MN | 1°03′ 19 MILS | 13½° 240 MILS

SCALE 1:24 000

1 MILE | 1000 0 1000 2000 3000 4000 5000 6000 7000 FEET | 1 KILOMETRE

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSIFICATION

Primary highway, hard surface | Light-duty road, hard or improved surface
Secondary highway, hard surface | Unimproved road
Interstate Route | U. S. Route | State Route

ARIZONA
QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1979

HOUCK, ARIZ.
N3515—W10907.5/7.5

1971

AMS 4154 I SW—SERIES V898