DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
INSTITUTO NACIONAL DE INVESTIGACIONES GEOLOGICO–MINERAS
MINISTERIO DE MINAS Y PETROLEOS, COLOMBIA

MISCELLANEOUS INVESTIGATIONS SERIES
MAP I–849

Topographic base compiled from maps at 1:25,000 scale of the Instituto Geográfico Agustín Codazzi. Gauss conformal projection, point of origin, Bogota; X, 1,000,000 metres North, and Y, 1,000,000 metres East

SCALE 1:100 000

CONTOUR INTERVAL 200 METRES
DATUM IS MEAN SEA LEVEL

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1975

Prepared on behalf of the
GOVERNMENT OF COLOMBIA
under the auspices of the
AGENCY FOR INTERNATIONAL DEVELOPMENT,
U.S. DEPARTMENT OF STATE

EXPLANATION

Qal — ALLUVIUM AND COLLUVIUM—Lacustrine and fluvial silty clay; glacial deposits and unconsolidated terrace deposits

Qtd — Talus and landslide deposits

QTt — TILATA FORMATION—Sandstone and sand, fine- to coarse-grained, cross-bedded, off-white to reddish-gray; massive conglomerate, conglomeratic sandstone, and gravel

Ter — REGADERA FORMATION—Medium- to coarse-grained, locally conglomeratic quartz sandstone, commonly cross-bedded, light yellowish-brown, orange, and reddish-orange

Teb — BOGOTA FORMATION—Variegated mudstone and silty claystone with lenses of generally friable, variegated, fine- to medium-grained sandstone; rare sandy conglomerate lenses and low-grade coal layers

Tpc — CACHO SANDSTONE—Principally medium-grained light-gray to orange-gray quartz sandstone, commonly crossbedded; local quartz-pebble conglomerate interbeds; consists locally of two sandstone members separated by a silty claystone interbed

TKgu — GUADUAS FORMATION INCLUDING RIO GUANDOQUE CONGLOMERATE FACIES—Variegated silty claystone, argillaceous siltstone, and fine- to medium-grained quartz sandstone, commonly friable, locally crossbedded; upper part commonly reddish-gray, lower part contains abundant coal. Red stipple, Rio Guandoque conglomerate facies, a red calcareous conglomerate containing clasts derived from strata associated with salt deposits

Ksgs, Ksgp — UPPER GUADALUPE FORMATION WITH PALACIO LIMESTONE
Ksgs, In upper part, hard to friable, medium- to coarse-grained light-gray quartz sandstone, locally massive, commonly crossbedded; in middle part, thin-bedded siliceous quartz siltstone and local dark-gray silty claystone; in lower part, medium-grained, light-gray, commonly massive quartz sandstone and local dark-gray silty claystone.
Ksgp, Palacio Limestone, massive, dark brownish-gray, coarse-grained, coquinoidal

Ksl — LA LUNA FORMATION
Undifferentiated well-stratified dark-brown marl; resistant to erosion

Ksgi — LOWER GUADALUPE FORMATION—In upper part, light- to dark-gray silty claystone and argillaceous siltstone, light-gray quartz sandstone, locally massive, commonly crossbedded; in middle part, thin-bedded siliceous kaolinitic light-gray siltstone and local dark-gray, silty claystone; in lower part, medium-grained light-gray quartz sandstone and local dark-gray silty claystone

Ksc, Kscr, Kscf — CHIPAQUE FORMATION
Ksc, Light- to dark-gray claystone and argillaceous siltstone; thin beds of very fine grained quartz sandstone; locally thin coal layers and hematite-impregnated sandstone and siltstone; low-grade coal layers in lower part; argillaceous halite lenses in anticlinal axes (salt deposits shown by red x pattern in sections).
Kscr, Rute, local name for surficial accumulation derived from saline deposits; consists of black marly clay masses containing fragments of pyrite-bearing black clay.
Kscf, Ferruginous layers, siltstone and fine-grained sandstone impregnated with secondary iron oxides.
Kscc, Dark-gray lenticular limestone at base.

Kiu — UNE FORMATION—Light-gray, fine- to medium-grained, locally massive quartz sandstone and interbedded, gray to dark-gray silty claystone; in uppermost part sandstone predominates; muscovite and glauconite are local accessory minerals

Kif, Kifr — FOMEQUE FORMATION
Kif, Dark-gray silty claystone, shaley, commonly carbonaceous and micaceous; dark brownish-gray marl, commonly silty, rare thin coal seams; local dark-gray to black coquinoidal limestone lenses; local quartz sandstone lenses; local evaporite residue (rute, Kifr) and rare siderite

KJc — CAQUEZA GROUP INCLUDING UNDIFFERENTIATED CAQUEZA SANDSTONE—Dark-gray silty claystone, locally hard and marly, commonly pyritic; medium-grained light- to dark-gray quartz sandstone at top of group; dark-gray, sandy limestone locally; common quartz sandstone interbeds; basal conglomerate locally

Unconformity

CDf — FARALLONES GROUP—In upper part, gray coarse-grained massive limestone and silty dark-gray claystone; in middle part, hard, massive, generally fine-grained light-gray quartz sandstone; in lower part, mottled reddish-gray and greenish-gray finely sandy massive siltstone and dark-gray silty claystone

Contact—Dashed where location approximate or gradational

Fault—Arrows indicate relative movement. L, up; H, down

Thrust fault—Dashed where approximately located, dotted where concealed. Sawteeth on upper plate

Folds—Showing trace of axial plane and direction of plunge. Long dashes where inferred, short dashes where concealed

Anticline

Overturned anticline—Arrows show direction of dip of axial plane

Syncline

Overturned syncline—Arrows show direction of dip of axial plane

Strike and dip of beds
Value given where known

Inclined

Overturned

Vertical

Horizontal

Photogeologic

Mines

Salt deposit
On map

In cross section

Iron deposit

Limestone quarry

Prospects

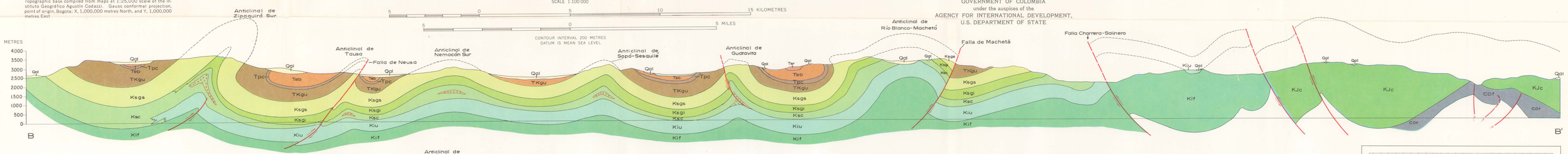
Zinc

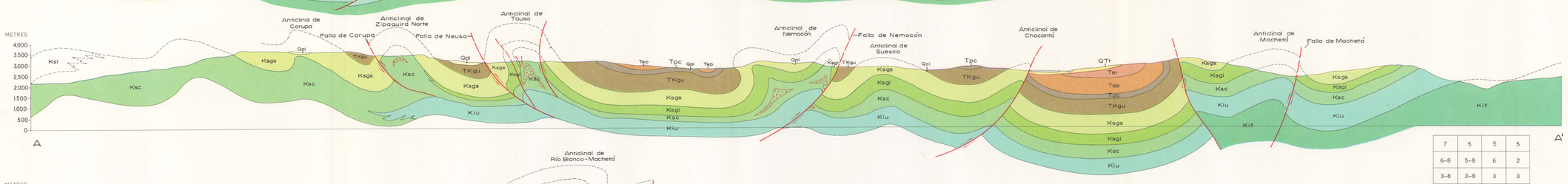
Kaolin

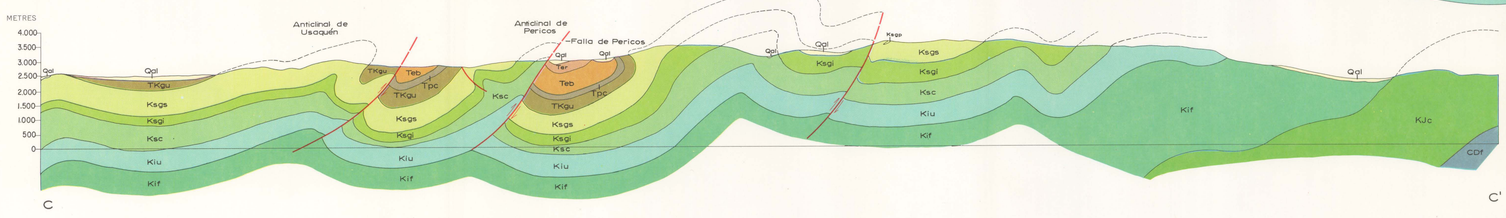
Phosphate rock

Dry well

Salt spring







7	5	5	5
6–8	5–8	6	2
3–8	3–8	3	3
1–8	1–2–8	2	4–6
1	2	1	3
1	2–8	4	2–6
1–8	4–7–8	2	3
1–8	1–3	3–6	4–6

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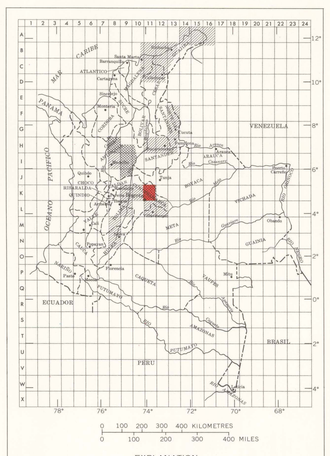
INDEX OF MAPPING RESPONSIBILITY



EXPLANATION

Area of this map

Maps published by the Instituto Nacional de Investigaciones Geológico-Mineras

Maps published by the U.S. Geological Survey

INDEX MAP SHOWING PUBLISHED GEOLOGIC QUADRANGLE MAPS

For sale by U.S. Geological Survey, Reston, Virginia 22092, price $1.25

GEOLOGIC MAP OF THE ZIPAQUIRA QUADRANGLE (K–11), COLOMBIA

By
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Marino Arce H., Instituto Nacional de Investigaciones Geológico–Mineras

1975