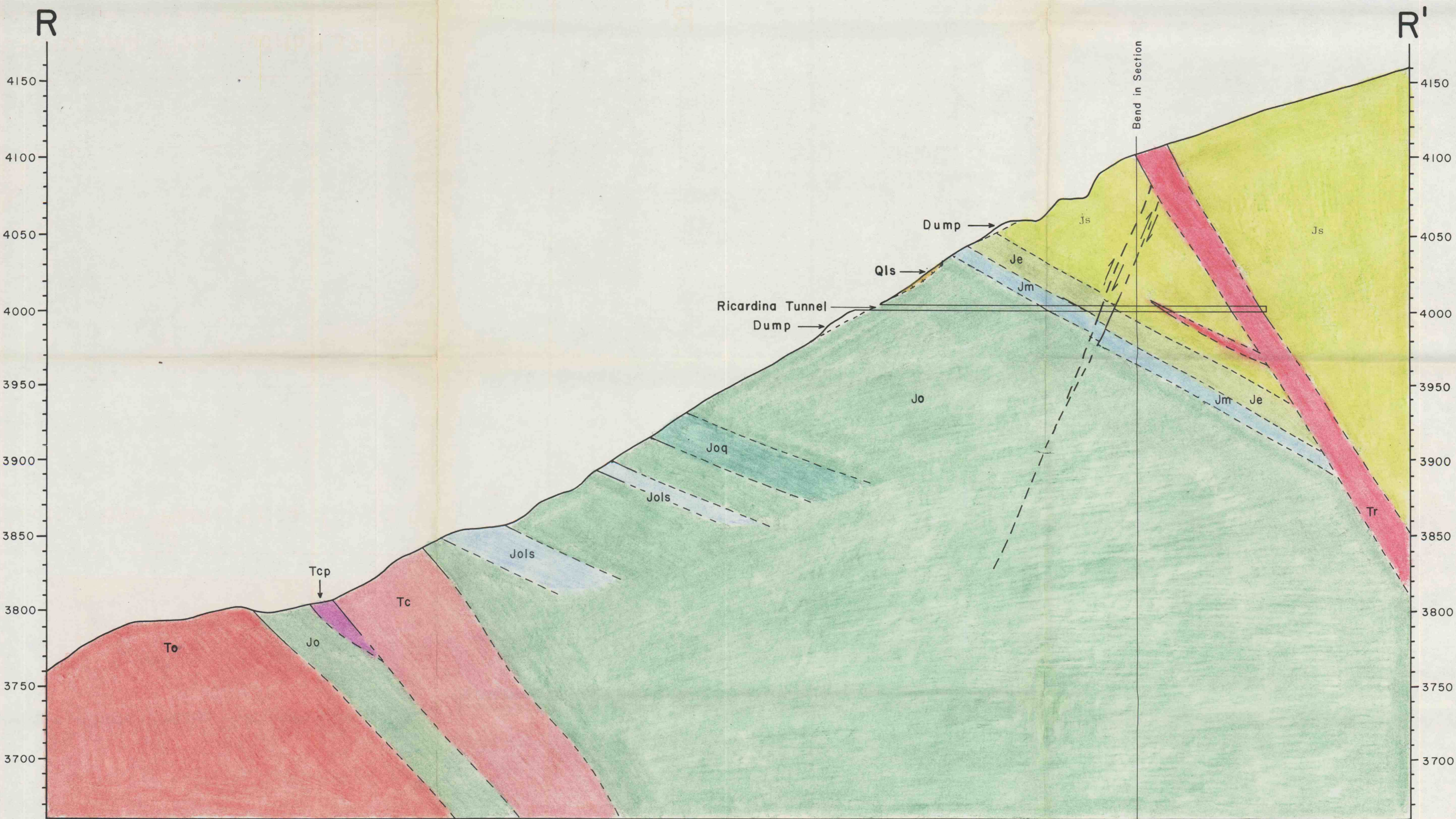


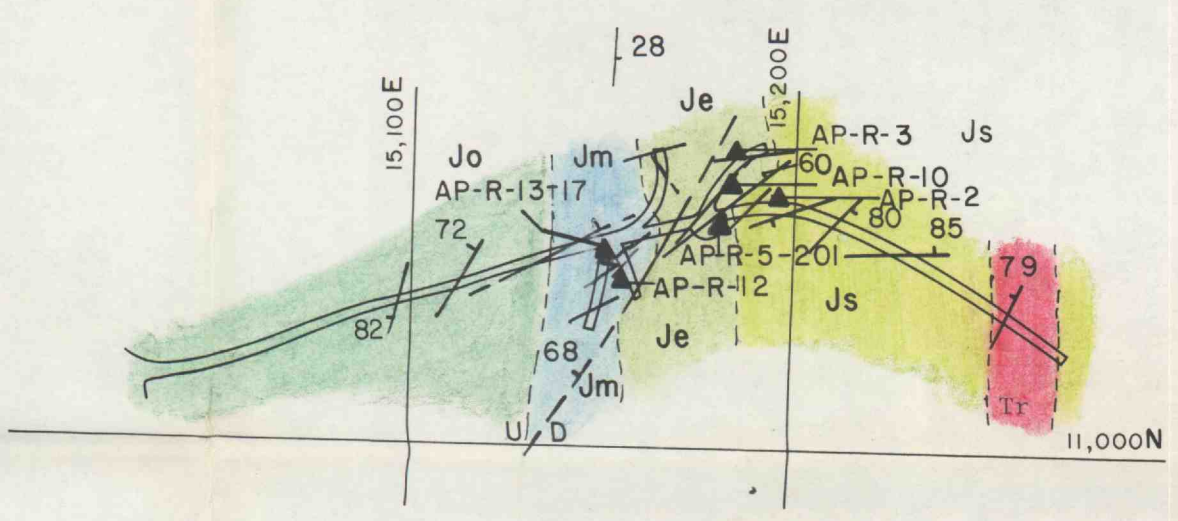
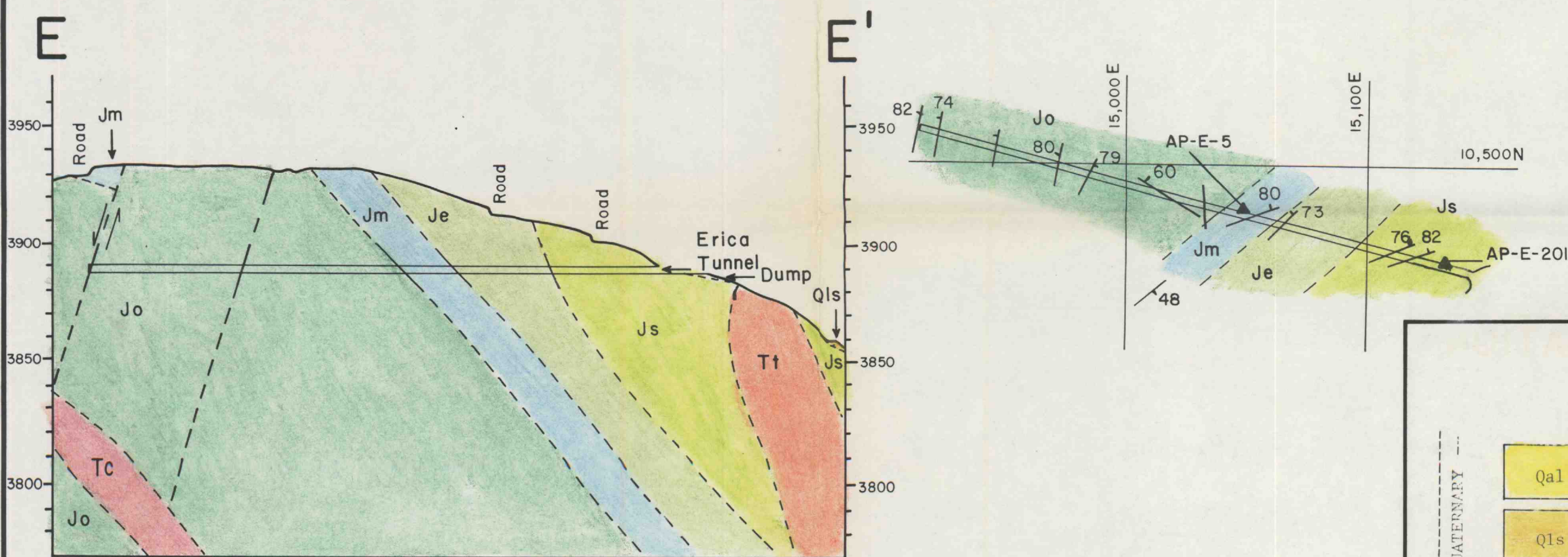
PLATE II: EXPLANATION AND CROSS SECTIONS FOR THE GEOLOGIC MAP OF THE ATASPACA PROSPECT, TACNA PERU.

DTB 1982

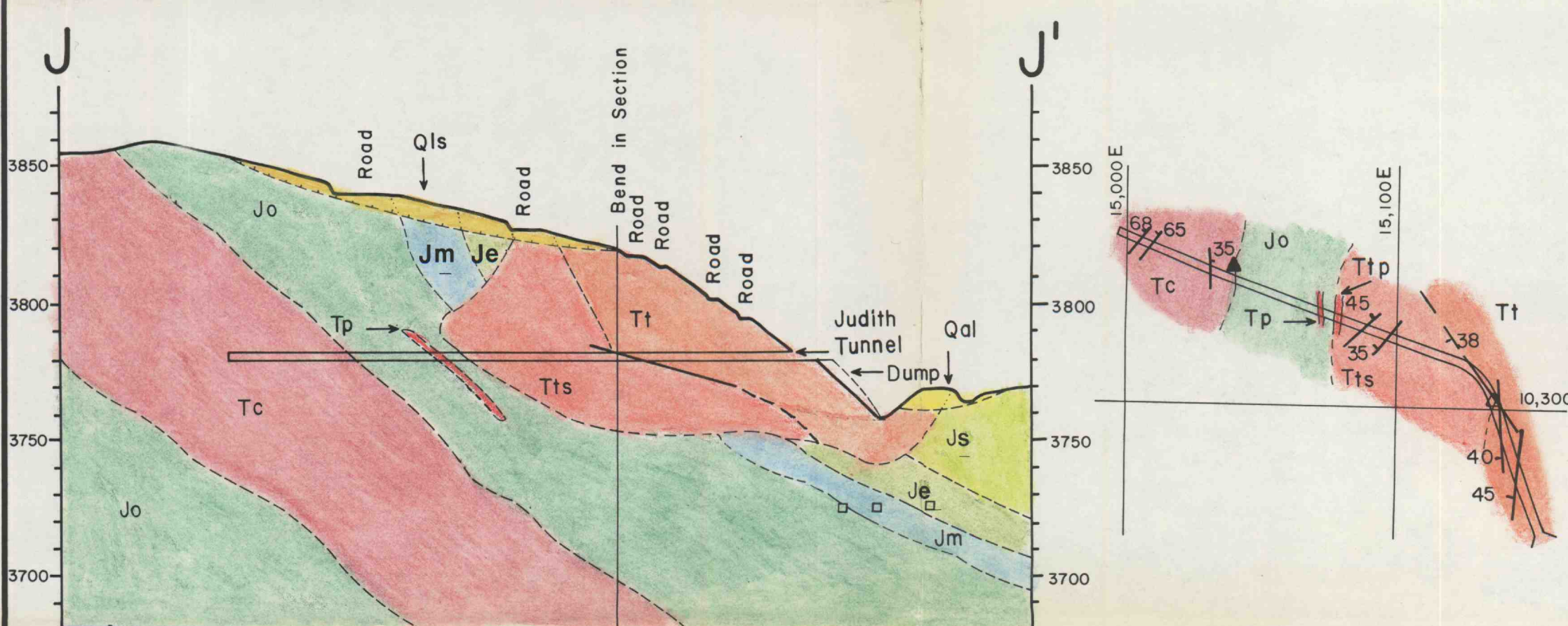
Section and Plan, Ricardina (4000 meter) Level, R-R'



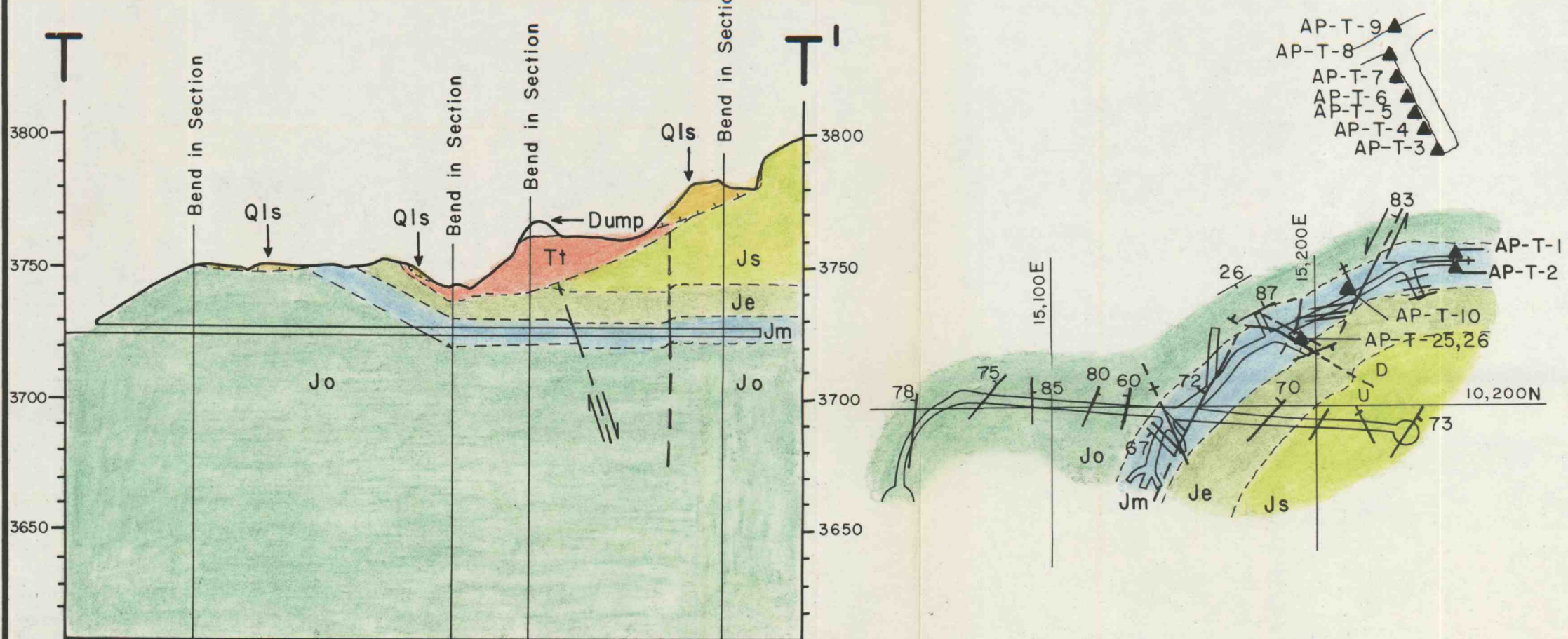
Section and Plan, Erica (3888 meter) Level, E-E'



Section and Plan, Judith (3780 meter) Level, J-J'



Section and Plan, Taracahua (3724 meter) Level, T-T'



EXPLANATION

**SURFICIAL DEPOSITS**

- Qal** Alluvium: Unconsolidated and poorly bedded sand and sedimentary breccia. Fragments are of local origin and rarely exceed 30 cm. in size.
- Qls** Landslide debris: Unconsolidated and unsorted rock debris up to, and in excess of, 30 m. in thickness. Fragments are of local origin and up to 40 cm. in size.

**INTRUSIVE ROCKS**

- Tr** Miscellaneous intrusive rocks: Very fine to medium-crystalline melanocratic to leucocratic diorite to granodiorite porphyry stocks, dikes and sills that were not divided according to composition.
- Tt** Taracahua granodiorite (Tt): Fine to medium-crystalline hornblende granodiorite with slight hydrothermal alteration of hornblende to chlorite, epidote, and biotite, and plagioclase feldspar to clay and white mica.
- Tts** Taracahua granodiorite stockwork (Tts): A stockwork breccia along the margin of the Taracahua granodiorite composed of granodiorite with intense alteration to clay and/or white mica along fractures that are oriented in random directions and space less than 30 cm. Granodiorite in the stockwork may be silicified.
- Ttp** Taracahua porphyry (Ttp): Fine to medium-crystalline hornblende-plagioclase porphyry present as silvers between the stockwork (Tts) and the country rock.
- Tr** Ricardina granodiorite (Tr): Fine to medium-crystalline plagioclase-quartz porphyry. Original mineralogy is uncertain because of intense hydrothermal alteration of ferro-magnesian minerals to chlorite and biotite and plagioclase feldspar to clay and white mica. The texture resembles that of the Oeste and Taracahua granodiorites. Contains up to 1% disseminated chalcopryite and trace amounts of bornite.
- To** Oeste granodiorite (To): Medium to coarsely-crystalline granular to porphyritic biotite-hornblende granodiorite and granite.
- Top** Oeste granodiorite porphyry (Top): Medium-crystalline plagioclase-hornblende-biotite quartz diorite and granodiorite porphyry present along the margin of the Oeste granodiorite.
- Tcp** Central quartz diorite porphyry (Tcp): Fine to medium-crystalline plagioclase-hornblende-biotite quartz diorite to granodiorite porphyry. Plagioclase feldspar is slightly altered to clay and white mica, and hornblende, biotite, and augite are somewhat altered to epidote, chlorite, and actinolite.
- Tc** Central quartz diorite (Tc): Fine to medium-crystalline plagioclase, hornblende, quartz-biotite quartz diorite to granodiorite. Same hydrothermal alteration as the Central quartz diorite porphyry, but with hydrothermal biotite in the southern portion.

**TARACAHUA FORMATION**

- Js** Sarane member: Grey, thinly-laminated to thinly-bedded siltstone with very thin to thick, massive interbeds of white to grey, fine to medium grained quartz wacke and arenite.
- Je** Erica member: Dark grey, laminated to medium-bedded siltstone with thin to medium thick interbeds of quartz wacke and thin interbeds of grey biomicrite. Locally hornfelsed.
- Jm** Manto member: Dark grey to grey, laminated to medium-bedded biomicrite with sandy and silty interbeds. The unit is ubiquitously recrystallized and locally replaced by wollastonite, garnet, and pyroxene skarns (see Figures 8 and 9 of text for the distribution of these).
- Jo** Oeste member: Pale green to grey siltstone and siliceous siltstone with laminated to thick interbeds of greywacke, quartz arenite, and biomicrite. Thick beds of quartz arenite (Joq) and biomicrite (Jols) are divided.

**SYMBOLS**

- Fault** solid where certain, dashed where approximate, and dotted where covered by younger units.
- Fault inferred**
- Contact** solid where certain, dashed where approximate, and dotted where covered by younger units.
- Landslide boundary**
- Bedding** with dip.
- Joint** vertical and with dip.
- Fracture** dip not recorded, vertical, and with dip.
- Breccia** angular fragments of plutonic or Taracahua formation rock in an igneous or rock-flour matrix.
- Sample location** with sample number.
- Subsurface excavations**
- Line of cross section**
- Road** with fill area.
- Fold**

SCALE: 1:2000

100 meters