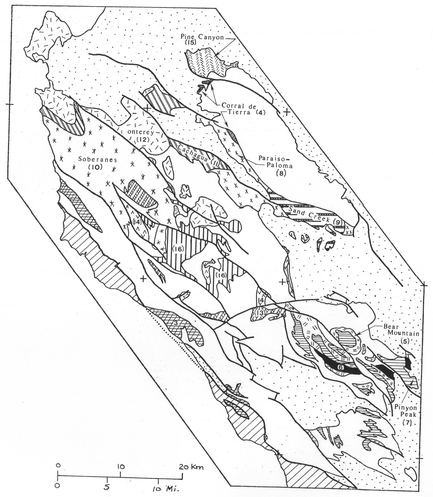
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF – 799
SHEET 1 OF 3

ROSS– MODAL AND CHEMICAL DATA, SANTA LUCIA RANGE, CALIF.



EXPLANATION

Cretaceous and younger sedimentary rocks and Quaternary alluvial deposits

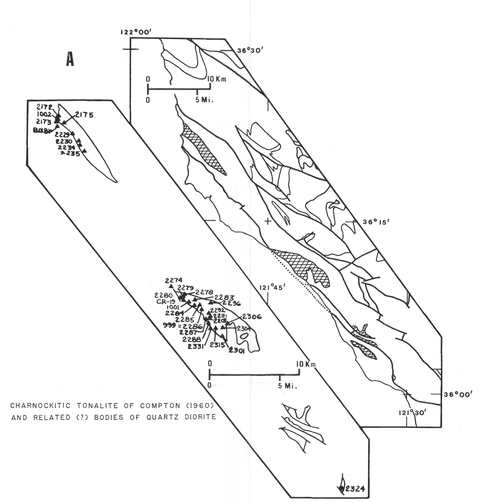
Mesozoic granitic rocks
Units numbered as on MF-750 (Ross, 1976a)

- Heterogeneous granitic complex of Wiebe (1966)
- Garnetiferous quartz monzonite of Pine Canyon
- Garnetiferous quartz monzonite of Little Sur and South Ventana Cone (Wiebe, 1966) and possibly related rocks near Arroyo Seco.
- Variable quartz monzonite–granodiorite of Big Pines and Island Mountain (Wiebe, 1966) and similar (?) mass of Willow Creek.
- Porphyritic granodiorite of Monterey
- Granodiorite of Cachagua
- Hornblende–biotite quartz diorite of Soberanes Point
- Porphyritic granodiorite of Sand Creek
- Hornblende–biotite quartz diorite of the Paraiso–Paloma area
- Quartz monzonite of Pinyon Peak
- Porphyritic granodiorite of Junipero Serra Peak
- Granodiorite–quartz diorite of Bear Mountain
- Hornblende–biotite quartz diorite–diorite of Corral de Tierra
- Charnockitic tonalite of Compton (1960) and related (?) rocks

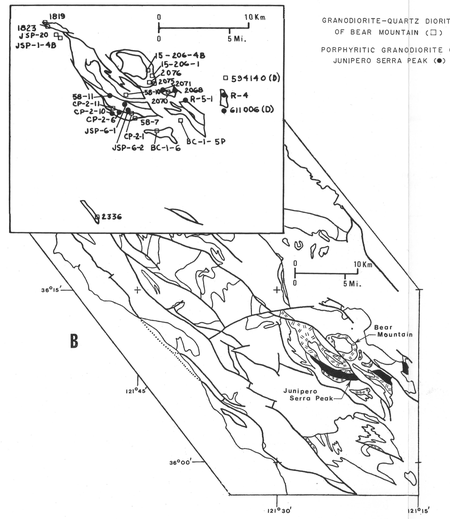
Franciscan assemblage, of Mesozoic age, west of the Salinian block

Pre-Cretaceous metamorphic rocks, undivided, of the Salinian block

Figure 1.--Distribution of granitic rock units of the Santa Lucia Range

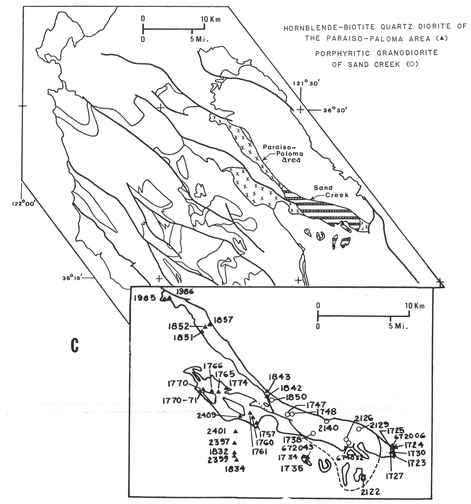


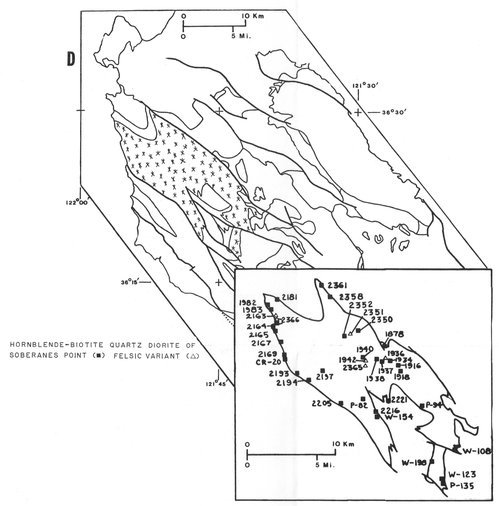
CHARNOCKITIC TONALITE OF COMPTON (1960) AND RELATED (?) BODIES OF QUARTZ DIORITE



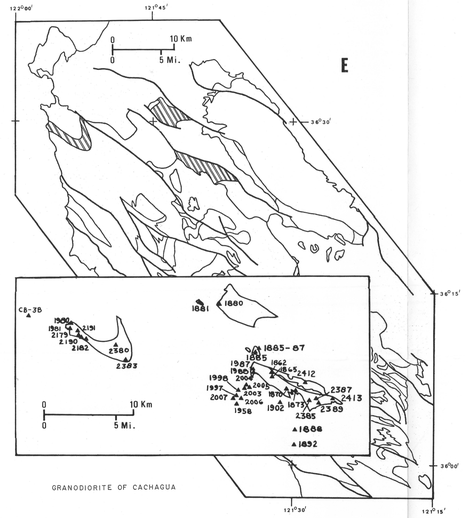
GRANODIORITE–QUARTZ DIORITE OF BEAR MOUNTAIN (□)

PORPHYRITIC GRANODIORITE OF JUNIPERO SERRA PEAK (●)

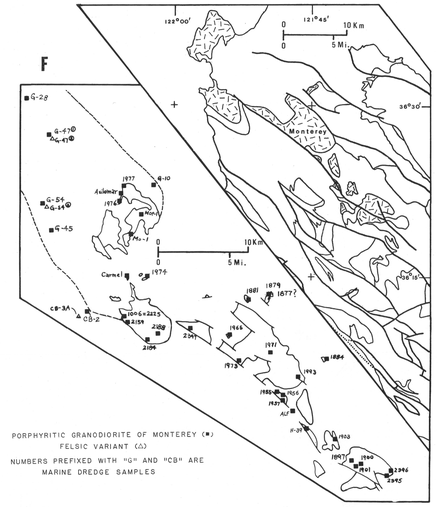




HORNBLENDE–BIOTITE QUARTZ DIORITE OF SOBERANES POINT (■) FELSIC VARIANT (△)



GRANODIORITE OF CACHAGUA



PORPHYRITIC GRANODIORITE OF MONTEREY (●)
FELSIC VARIANT (△)
NUMBERS PREFIXED WITH "G" AND "CB" ARE MARINE DREDGE SAMPLES

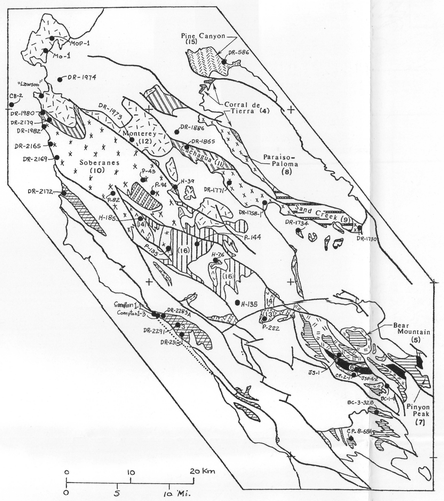
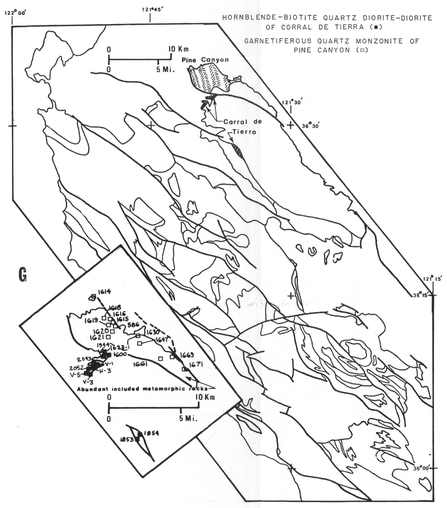
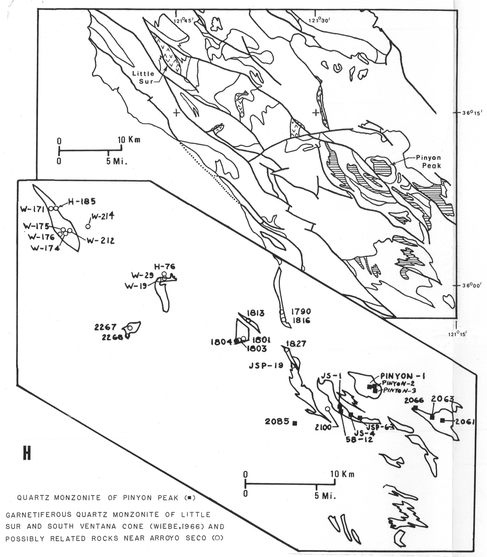


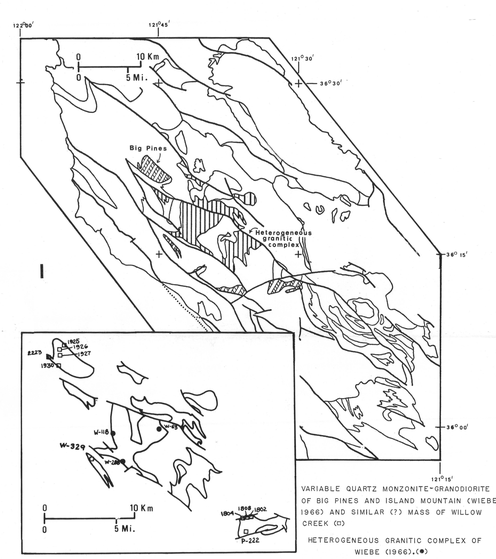
FIGURE 3.– LOCATIONS OF CHEMICALLY ANALYZED SPECIMENS OF PLUTONIC ROCKS OF THE SANTA LUCIA RANGE



HORNBLENDE–BIOTITE QUARTZ DIORITE–DIORITE OF CORRAL DE TIERRA (■)
GARNETIFEROUS QUARTZ MONZONITE OF PINE CANYON (○)



QUARTZ MONZONITE OF PINYON PEAK (●)
GARNETIFEROUS QUARTZ MONZONITE OF LITTLE SUR AND SOUTH VENTANA CONE (WIEBE, 1966) AND POSSIBLY RELATED ROCKS NEAR ARROYO SECO (○)



VARIABLE QUARTZ MONZONITE–GRANODIORITE OF BIG PINES AND ISLAND MOUNTAIN (WIEBE, 1966) AND SIMILAR (?) MASS OF WILLOW CREEK (□)

HETEROGENEOUS GRANITIC COMPLEX OF WIEBE (1966).(●)

FIGURE 2.– LOCATIONS OF MODALLY ANALYZED SPECIMENS FOR INDIVIDUAL GRANITIC UNITS (PATTERNED AS IN FIGURE 1).(A THROUGH I)

GENERALIZED DISTRIBUTION OF GRANITIC ROCKS AND LOCATIONS OF MODALLY AND CHEMICALLY ANALYZED SPECIMENS

MAPS SHOWING SAMPLE LOCALITIES AND TERNARY PLOTS AND GRAPHS SHOWING MODAL AND CHEMICAL DATA FOR GRANITIC ROCKS OF THE SANTA LUCIA RANGE, SALINIAN BLOCK, CALIFORNIA COAST RANGES

by
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1977

Interior--Geological Survey, Reston, Va.--1977

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