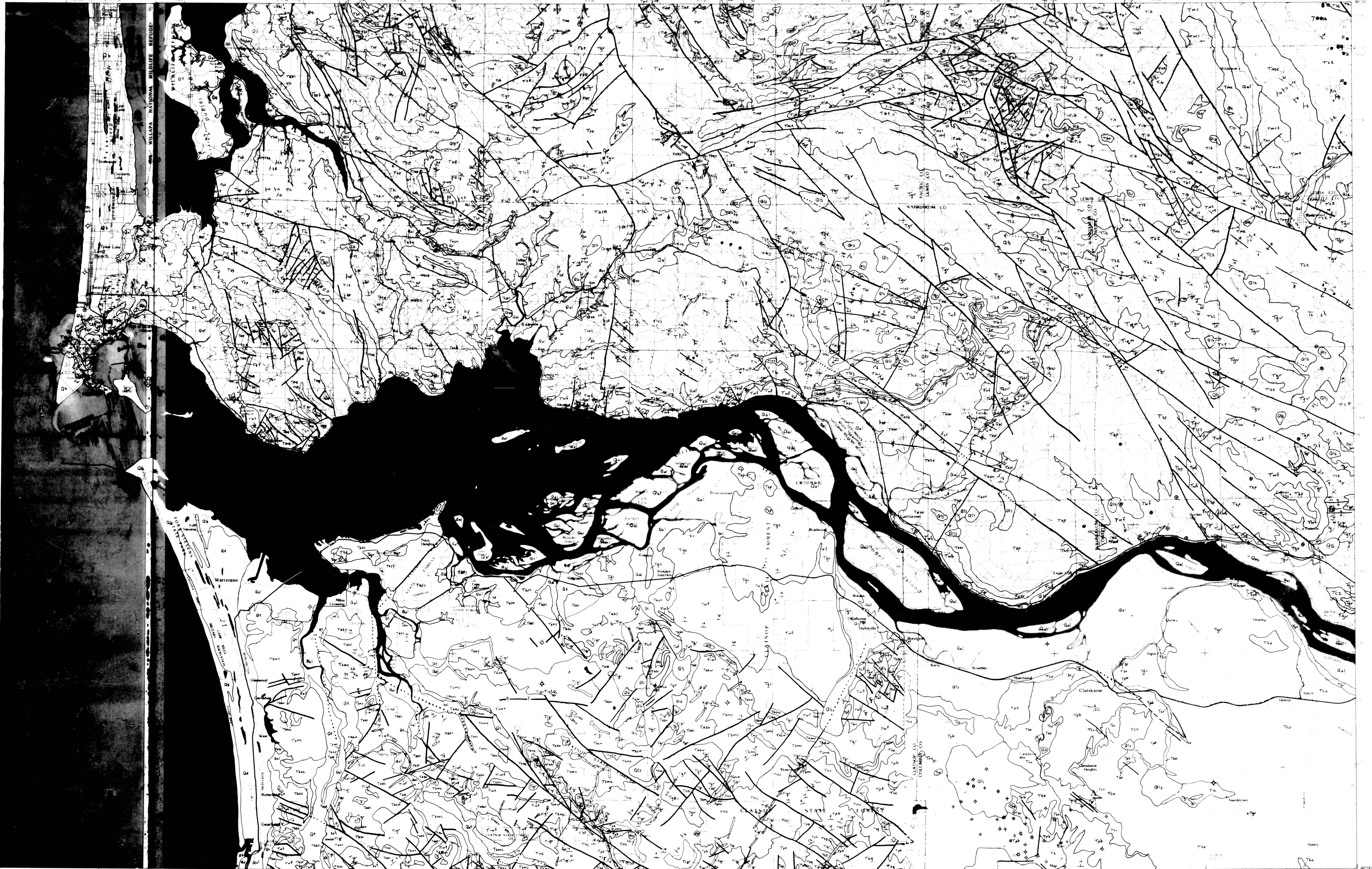


30X60 MINUTE SERIES (TOPOGRAPHIC) ASTORIA.

WASHINGTON

30X60 MINUTE SERIES



ILWACO, WASHINGTON-OREGON
N4600 W12400/30X60
1980

KILOMETERS 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
MILES 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

SCALE 1:100 000

1 CENTIMETER ON THE MAP REPRESENTS 1 KILOMETER (IN THE GROUND)

ASTORIA.

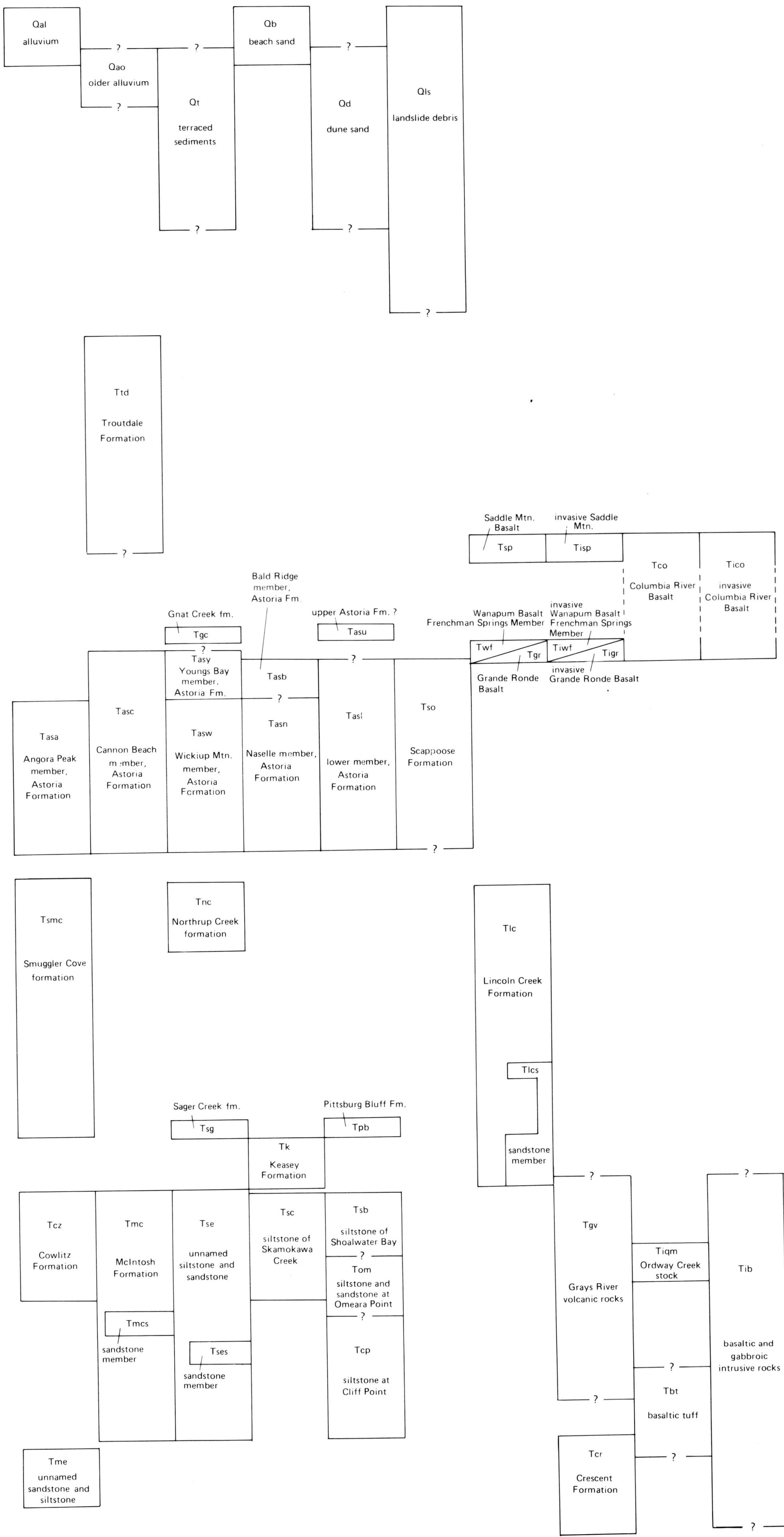
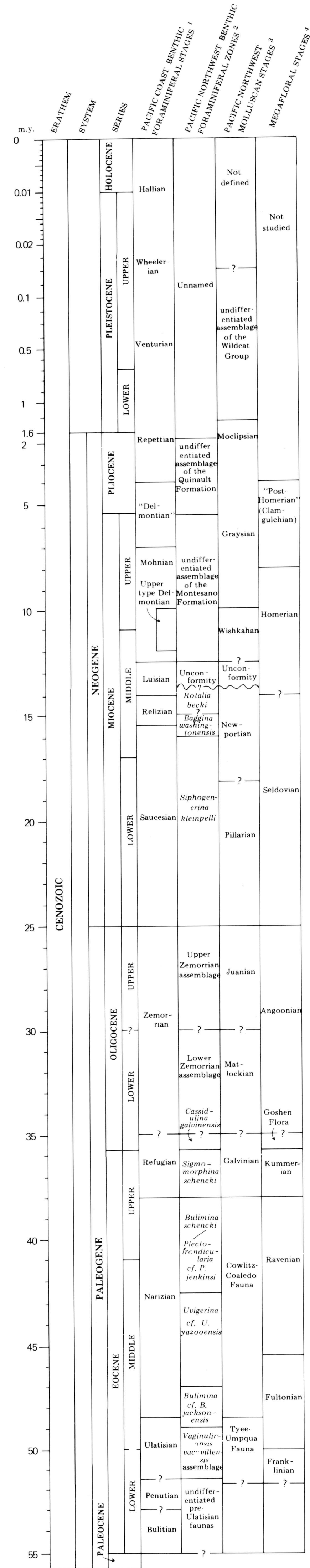
WASHINGTON
N4600 W12300/30X60

GEOLOGIC MAP OF THE ASTORIA AND ILWACO QUADRANGLES, WASHINGTON AND OREGON

compiled by
TIMOTHY J. WALSH

1987

THIS REPORT CONSISTS OF 1 MAP SHEET AND A 28 PAGE TEXT



MAP EXPLANATION

- Horizontal beds
- Strike and dip of beds
- Contact, dashed where uncertain
- Anticline, showing plunge; dashed where uncertain, dotted where concealed
- Syncline, showing plunge; dashed where uncertain, dotted where concealed
- Mappable sandstone bed
- Fault, showing sense of displacement; dashed where uncertain, dotted where concealed
- Thrust fault, bars on upper plate
- Dike
- Coal test
- Abandoned oil or gas well
- Shut in gas well
- Producing gas well