

CONVERSION FACTORS

For readers who prefer to use metric units, conversion factors for inch-pound units used in this report are listed below. Constituent concentrations are given in mg/L (milligrams per liter), which is equal to parts per million. Specific conductance is expressed as  $\mu$ S/cm (microsiemens per centimeter at 25 degrees Celsius).

**Multiply**                      **By**                      **To obtain**  
acre                              4,047                      square meter  
foot (ft)                        0.3048                     meter  
mile (mi)                        1.609                      kilometer

Temperature in °C (degrees Celsius) can be converted to °F (degrees Fahrenheit) as follows:

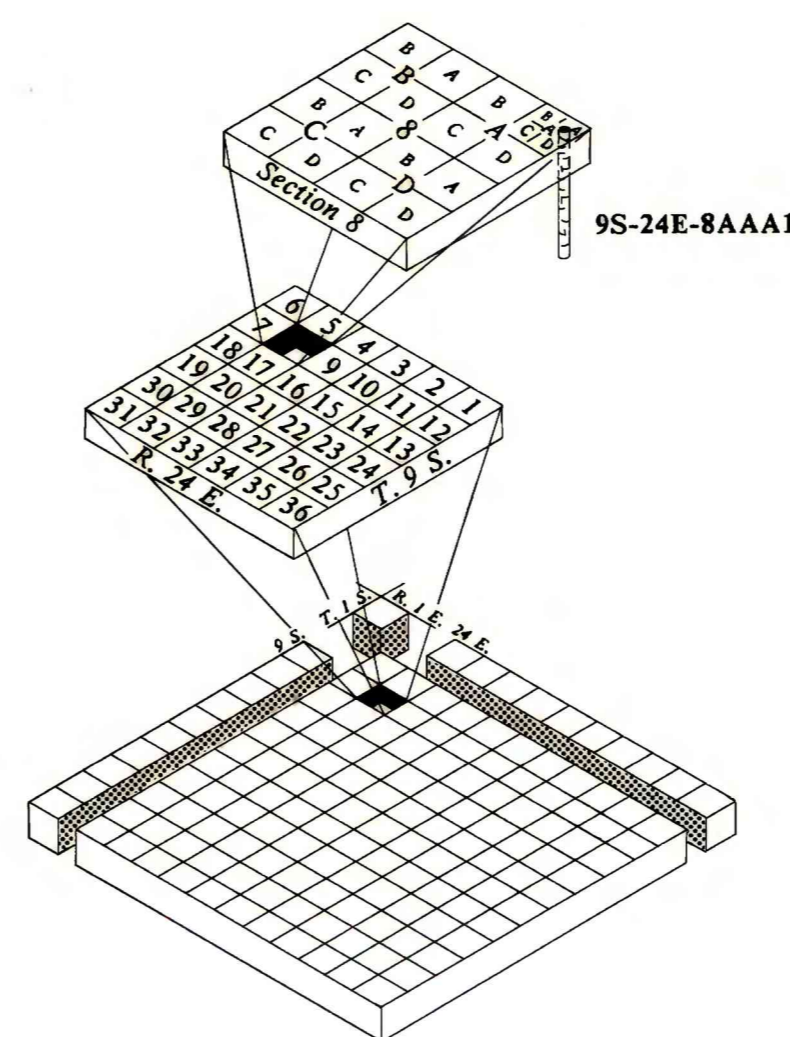
$$^{\circ}\text{F} = (1.8)^{\circ}\text{C} + 32$$

All water temperatures are reported to the nearest one-half °C.

WELL-NUMBERING SYSTEM

The well-numbering system used by the U.S. Geological Survey in Idaho indicates the location of wells within the official rectangular subdivision of public lands, with reference to the Boise base line and Meridian. The first two segments of the number designate the township (north or south) and range (east or west). The third segment gives the section number; three letters, which indicate the ¼ section (160-acre tract), ¼-¼ section (40-acre tract), and ¼-¼-¼ section (10-acre tract); and serial number of the well within the tract.

Quarter sections are designated by the letters A, B, C, and D in counterclockwise order from the northeast quarter of each section. Within the quarter sections, 40-acre and 10-acre tracts are lettered in the same manner. Well 9S-24E-8AAA1 (example at right) is in the NE¼NE¼NE¼ sec. 8, T. 9 S., R. 24 E., and is the first well inventoried in that tract.

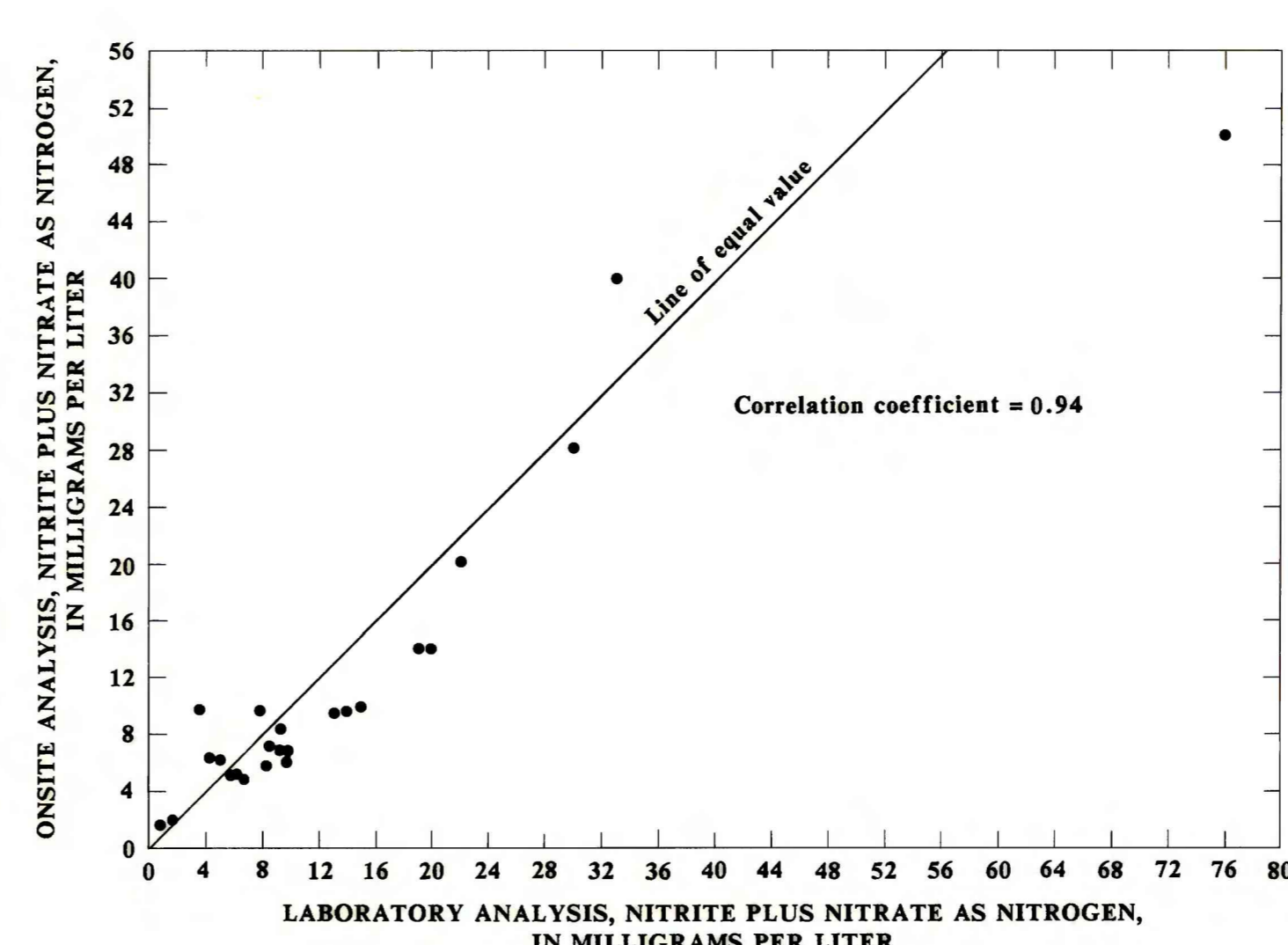
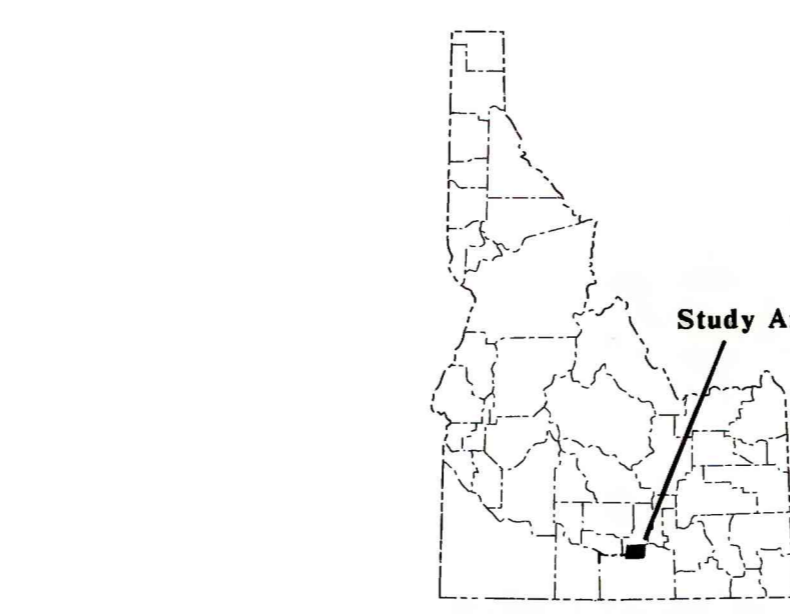
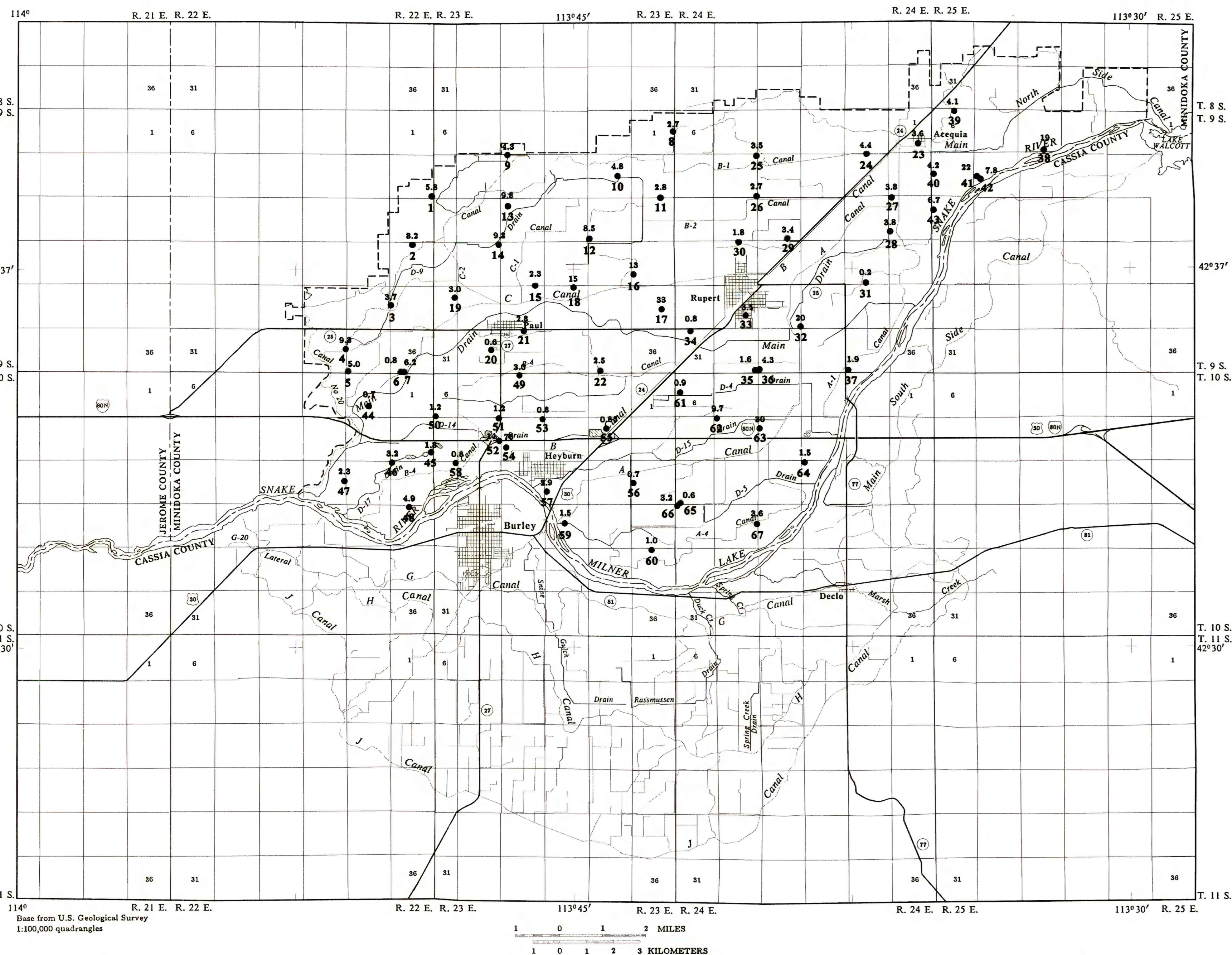


EXPLANATION

- Nitrite plus nitrate as nitrogen, in milligrams per liter. Laboratory values given when available
- Well
- 41 Reference number (see table above, right)
- Boundary of Minidoka Irrigation District and study area

WATER-QUALITY AND SELECTED WELL-INVENTORY DATA

Table with columns: Well number, Well location, Date sampled, Total depth of well (feet), Water level below land surface (feet), Specific conductance (µS/cm), pH (standard units), Temperature (°C), Bicarbonate (total as HCO3), Alkalinity (total as CaCO3), Chloride (dissolved as Cl), Nitrite plus nitrate as nitrogen (mg/L as N), Nitrate as nitrogen (mg/L as N), Nitrogen, ammonia plus organic nitrogen (mg/L as N), Nitrogen, ammonia plus organic nitrogen (µg/L as N). The table lists 67 wells with their respective data points.



The purpose of this study was to determine concentrations of nitrogen compounds in ground water in the Minidoka Irrigation District. The Minidoka Irrigation District is north of the Snake River and encompasses most of southern Minidoka County. The scope of the study was limited to inventorying 67 wells and making onsite determinations of depth to water, specific conductance, pH, water temperature, and concentrations of alkalinity, dissolved chloride, and dissolved nitrite plus nitrate (as nitrogen). When onsite nitrite plus nitrate concentrations exceeded about 6 mg/L nitrogen, ground-water samples were collected for nitrite plus nitrate (as nitrogen) and ammonia plus organic nitrogen (as nitrogen) analyses at the U.S. Geological Survey National Water Quality Laboratory.

Locations of wells and concentrations of nitrite plus nitrate (as nitrogen) are shown on the map at left. Water quality and selected well-inventory data for 67 wells sampled during June 1987 are shown in the table above. A statistical summary of selected water-quality data is shown in the table below, and onsite versus laboratory measurements of nitrite plus nitrate (as nitrogen) concentrations are shown in the graph at left.

STATISTICAL SUMMARY OF SELECTED WATER-QUALITY DATA

Table with columns: Water-quality constituent, Number of samples, Median (50 percent), Range (Maximum-Minimum), and Number of samples with concentrations exceeding national drinking-water limits. The table lists 14 water quality constituents with their respective statistical data.

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SELECTED WATER-QUALITY DATA FOR THE MINIDOKA IRRIGATION DISTRICT, SOUTH-CENTRAL IDAHO, JUNE 1987  
By  
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1987