The Star Formation Histories of Two Northern LMC Fields [A. E. Dolphin] A. E. Dolphin National Optical Astronomy Observatories, P.O. Box 26732, Tucson, AZ 85726, USA Accepted . Received ; in original form 1999 July 4

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abstract Ground-based $UBV$ photometry of two fields in the northern disk of the LMC are presented. A distance modulus of $(m - M)_0 = 18.41 \pm 0.04$ and an extinction of $A_V = 0.30 \pm 0.05$ has been calculated for these fields. The measurable star formation history of the LMC began no more than 12 Gyr ago with a strong star forming episode with $[Fe/H] = -1.63 \pm 0.10$ that accounted for approximately half (by mass) of the LMC's total star formation in the first 3 Gyr. The data does not give accurate star formation rates during intermediate ages, but there appears to have been a recent increase in the star formation rate in these fields, beginning approximately 2.5 Gyr ago, with the current metallicity in the region being $[Fe/H] = -0.38 \pm 0.10$. The two fields have had very similar star formation rates until 200 Myr ago, at which point one shows a large increase.