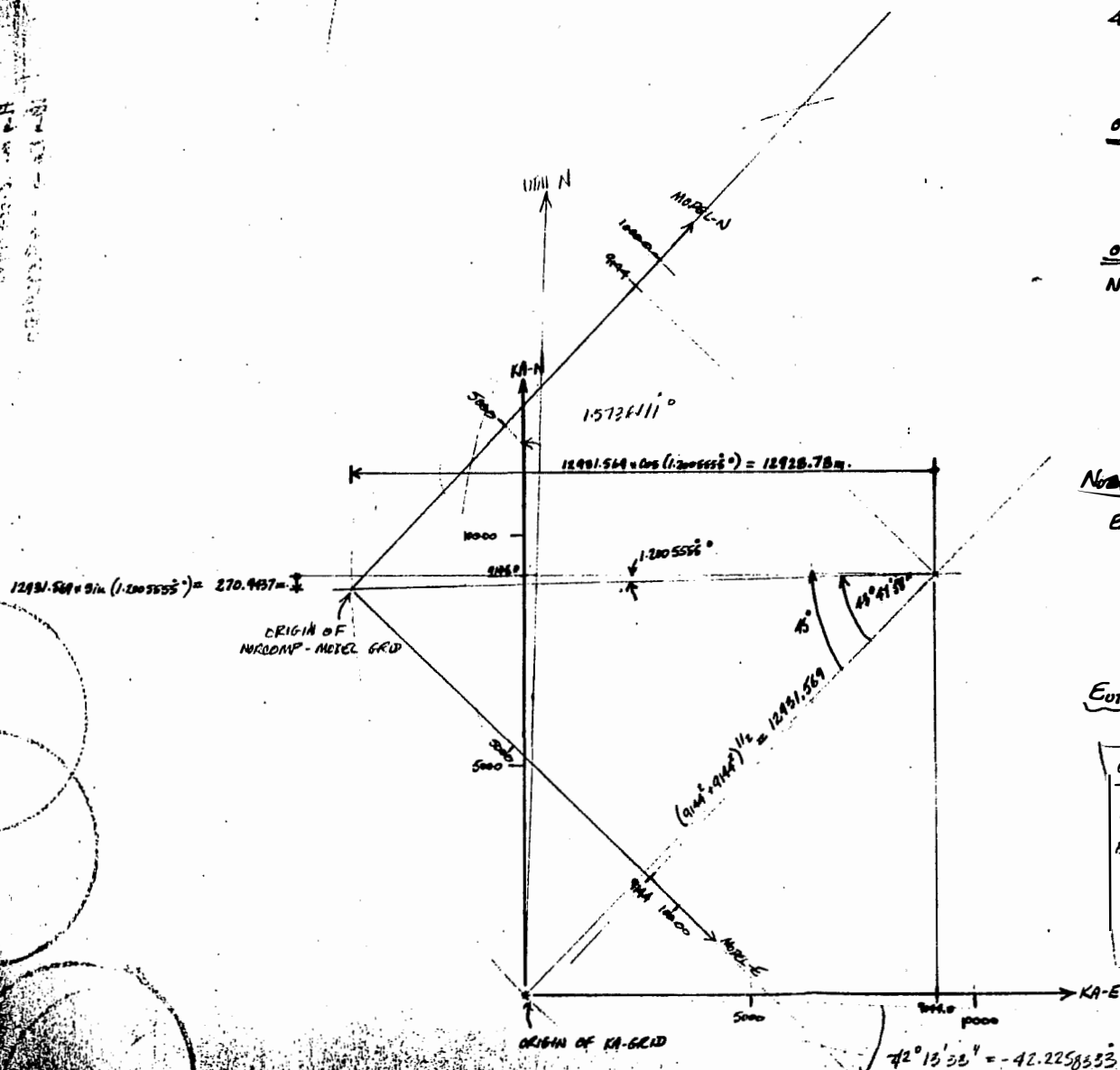


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$42^{\circ}15'33'' = 42.2258333^{\circ}$

ORIGIN OF MIRCAMP MODEL GRID in KA-Coordinates.

North-KA = $9144.0 - 270.997 = 8873.0563$
 East-KA = $9144.0 - 12928.78 = -3784.73$

ORIGIN OF MIRCAMP MODEL GRID in UTM-Coordinates.

$N_{UTM} = N_0 + S * (N_{KA} * \cos \lambda + E_{KA} * \sin \lambda)$
 $= 6,894,007.1169 + 0.99950053 (8873.0563 * 0.9996229 + (-3784.73) * 0.0274612)$
 $= 6,894,007.1169 + 8761.1687$
 $N_{UTM} = 6,902,768.2856$

$E_{UTM} = E_0 + S * (E_{KA} * \cos \lambda - N_{KA} * \sin \lambda)$
 $= 584,995.2084 + 0.99950053 (-3784.73 * 0.9996229 - 8873.0563 * 0.0274612)$
 $= 584,995.2084 - 1020.9625$
 $E_{UTM} = 583,974.2459$

CONVERSION - UTM - MIRCAMP MODEL GRID

$$N_{MIRCAMP} = ((N_{UTM} - N_{MIRCAMP}) * \cos \lambda - (E_{UTM} - E_{MIRCAMP}) * \sin \lambda) / S$$

$$E_{MIRCAMP} = ((N_{UTM} - N_{MIRCAMP}) * \sin \lambda + (E_{UTM} - E_{MIRCAMP}) * \cos \lambda) / S$$

where $N_{MIRCAMP} = 6,902,768.2856$ $E_{MIRCAMP} = 583,974.2459$
 $\lambda = -42.2258333^{\circ}$
 $S = 0.99950053$

GRUM - MINTEC MODEL GENERATION

15.1.83

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