

The screenshot displays the SURPAC software interface for Polar Calculations. The main window is titled 'SURPAC Ver 5.06 for Windows 98/NT/2000 - Polar Calculations'. It features a menu bar (File, General, Conversions, Least Squares, Topographical, Engineering, Mining, Cadastral, Help) and a toolbar with buttons for 'Options', 'Next Polar', 'Radial Polar', 'Sequential Polar', 'Print Polar', and 'AutoPrint = OFF'. The main data entry area is divided into 'Polar From' and 'Polar To' sections. The 'Polar From' section includes fields for Y Co-ordinate (114286.413), X Co-ordinate (2845483.026), Height (1451.882), Inst. Height (1.560), (SL+SE) Fac (0.999833), and Orient Correction (-0:00:04 ±12.1"). The 'Polar To' section includes Y Co-ordinate, X Co-ordinate, Height, Description (D1), and Horiz. Distance. Below these are 'Set Up Points' and 'Observed Polars' lists. A 'Printed Pages' window shows a grid of data points. A 'SURPAC Calculator' window is also visible, showing a numeric keypad and various mathematical functions.

The POLAR Programme, using Observation File data and showing Options, Printed Pages and the Calculator



Polars

- Manual Input, or direct reduction from a SURPAC Observation File
- Plane Data Calculations :-
 - 2D [Hor. Direction & Distance] providing [Y, X] values
 - 3D [Hor. Direction, Slope Distance & Vertical angle] providing [Y, X, Z] values
- Field Data Calculations :-
 - 2D [Oriented Direction, Reduced Distance] providing [Y, X] values
 - 3D [Oriented Direction, Reduced Distance & Height Diff] providing [Y, X, Z] values
- Each Set-Up in the defined Observation File is oriented using one or more orientation observations, and the T- t corrections are applied. Distances are reduced for Scale Enlargement, Sea Level, Projection Factor and Slope. Vertical Angles are corrected for Curvature and Refraction.
- Calculation may be in Normal, Radial or Sequential Polar mode.