

1988/20. SAMPROP - A data base for basic physical property data from samples and drill core.

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Abstract

The program suite described provides a storage and retrieval method for basic physical property data (density, sonic velocity, magnetic susceptibility, chargeability and resistivity) measured on hand specimens or drill core.

Provision is included for adding to the data, correcting the data and searching the data. Data may also be sent to a file for later processing.

INTRODUCTION

As part of the Mt Read Volcanics Project, measurements of physical properties were made on oriented samples, hand specimens and drill core. The oriented samples are registered in the Department of Mines rock collection and their data is assessed through the TASROK, CEMDAT and PHYSPROP data bases. The remaining samples have less information available and are stored in a simple format using the SAMPROP data base. Age, rock unit name, and generic type are abbreviated in accordance with the TASROK user guide.

DATA BASE MAINTENANCE

Data Entry

Data are entered by responding to prompts. Where a prompt terminates in * and a previous value is displayed, the previous value may be re-entered by typing return, a new value may be entered or a blank put in by typing backslash (\).

- (a) More drill holes or samples - enter Y to input further data
- enter N to exit from the program
- (b) East co-ord - the six-digit AMG easting
- (c) North co-ord - the six-digit AMG northing. The implied leading 5 is not entered
- (d) R.L. - the collar R.L. for drill holes, the elevation for samples.
Enter -1 if not known.
- (e) Angle - the hole angle - vertical = 90
Enter -1 if not known
- (f) Hole or sample name - up to 20 characters
- (g) Company or collector - up to 20 characters

- (h) Depth - for drill core enter the depth below the collar
 - for samples enter 0
 - to go back to the prompt for the next drill hole/sample location data to enter - 1
- (i) Density - the density in t/m³
 - Enter -1 if not known
- (j) Velocity - the sonic velocity in metres/second
 - Enter -1 if not known
- (k) Susceptibility - the magnetic susceptibility (units are 10⁻³ SI)
 - Enter -1 if not known
- (l) IP - the induced polarisation chargeability in %
 - Enter -1 if not known
- (m) Resistivity - the galvanic resistivity (ohm-metres)
 - Enter -1 if not known
- (n) Age* - the geological age of the sample - use a standard TASROK abbreviation
 - set blank if not known
- (o) Rock unit* - the unit code - use a standard TASROK abbreviation
 - set blank if not known
- (p) Generic type* - the generic type - use a standard TASROK abbreviation
 - set blank if not known
- (q) Comments* - may be used for additional generic types and searched as well
 - set blank if not needed

At the end of input a proof check is output on the printer and the temporary file is checked against the TASROK abbreviation for valid age, rock unit and generic type codes.

Correction of new data

The temporary file, SAMNEW1.DAT, may be corrected using the standard system editing facilities. It should be checked after editing by typing SAMCHECK.

Data merging

After checking and correction data are merged with the main file by typing SAMMERGE.

Data searching

The search phase is entered by typing SAMSRCH. An entry will be retrieved only if the specified search options are matched. Searching for age, rock unit code or generic type uses the standard TASROK abbreviations. Prompts are:

- (i) Include hole/sample location, name etc. in output
 - type Y to include this data in the output
 - would not normally be used
- (ii) Send output to printer - type N to prevent output to the printer
- (iii) Send output to a disk file - type Y to send the output to a disk file
 - used for later processing
- (iv) Search by area - type Y to search by AMG co-ordinates
 - Westernmost easting in metres)
 - Easternmost easting in metres) boundary of the area
 - Southernmost northing in metres) to be searched
 - Northernmost northing in metres)
- (v) Hole/sample name - one or more names on a line, each terminated by /.
If this option is not required leave the line blank.
- (vi) Company/collector - details as for hole/sample name.
- (vii) Age - one or more standard abbreviations on a line, each abbreviation terminated by /.
If this option is not required leave the line blank.
Note: the expansions and searching methods used in TASROK are also used here.
- (viii) Rock unit code - details as for age.
- (ix) Generic - details as for age.
- (x) Generic type (in comments) - details as for hole/sample name
 - allows searching for generic type or other details in the comments field
- (xi) Require either
(generic type [O]r comments)
or
(generic type [A]nd comments) - type O for a logical or of the two fields or A for a logical and of the two fields.
 - e.g. when generic is dolom and generic type (in comments) is py
 - if O is typed samples having either dolom as a generic type or py as a comment will be found
 - if A is typed only samples having both dolom as a generic type and py as a comment will be found.
- (xii) Proceed with this search - type N if the search parameters are not satisfactory.
- (xiii) More searches - type Y if more searches are required. This returns you to prompt (iv)

If output to a file is requested, the file name is displayed and is of the form USER.DMP. The format of this file is:

EAST,NORTH,RL,ANGLE,HOLENAME,COMPANY (optional if selected)
FORMAT ('*',2I7,I5,I3,2(1X,A20))

DEPTH,DENSITY,SONIC,SWSC,IP,RESIST,AGE,UNIT,GENERICTYPE,COMMENT
FORMAT (1X,F6.1,F5.2,I4,F7.2,F5.2,E10.3E2,A4,2A5,A30)

The record length of this file is 82 characters. Unknown values are set to -1.

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