Author: **Richard Winder at BHP Utah International.**

MEASURED fields were designed primarily for users to maintain text characters such as, “<“, “>”, “NA”, etc., while equating this data to a numerical value. This allows calculations and statistics to be performed on the field while preserving text entries exactly as recorded. A side effect of MEASURED fields is the ability to enter text data such as geology and equate the text to a numeric value, which would define a particular color or pattern.

Procedure:

MEASURED fields are created in the *DEFINE,* program under the *Fields, Create* choice. It is helpful to give the field a name that will describe its contents. For example, the MEASURED field called “lithest” contains a pattern number which corresponds to a specific lithologic. The field type can be INTEGER, REAL or DATE, but for coding patterns and colors is necessary to use an INTEGER field type. The field class is MEASURED. In *Values* type the lithology description and then the number of the corresponding pattern, as shown below.

BASALT 26 SANDSTONE 13 LIMESTONE 8 GRANITE 4

BASALT is assigned a vee pattern, number 26. SANDSTONE is assigned a dot pattern, number 13.

In a second example create a MEASURED field called “lithologic”. This field is created the same way that “lith_patt” was created except, the field *Values* list is imported from an ASCII format file*. The file is created using any word processor or editor. You simply type the *Values* list exactly as it would appear if you were typing the list inside TECHBASE. The file would look as follows:

BASALT 5 SANDSTONE 7 LIMESTONE 8 GRANITE 4

In this file BASALT is purple or pen number 5, SANDSTONE is yellow or pen number 7, LIMESTONE is brown or pen 8 and so on.

Save the file to a name that will help remind you of the contents. In this example the format file is called measure.fmt. Now when you are prompted for the field *Values* list just type in the name of your file as shown below.

(f,measure.fmt)

One advantage of using a file to enter the field values is that the space to list field contents is not limited to two lines. This allows more descriptive explanations, for example, BASALT would not have to be shortened to BAS. Another benefit of using a format file is the ability to easily change field values. You simply edit the ASCII file and modify the measured field using the updated file.

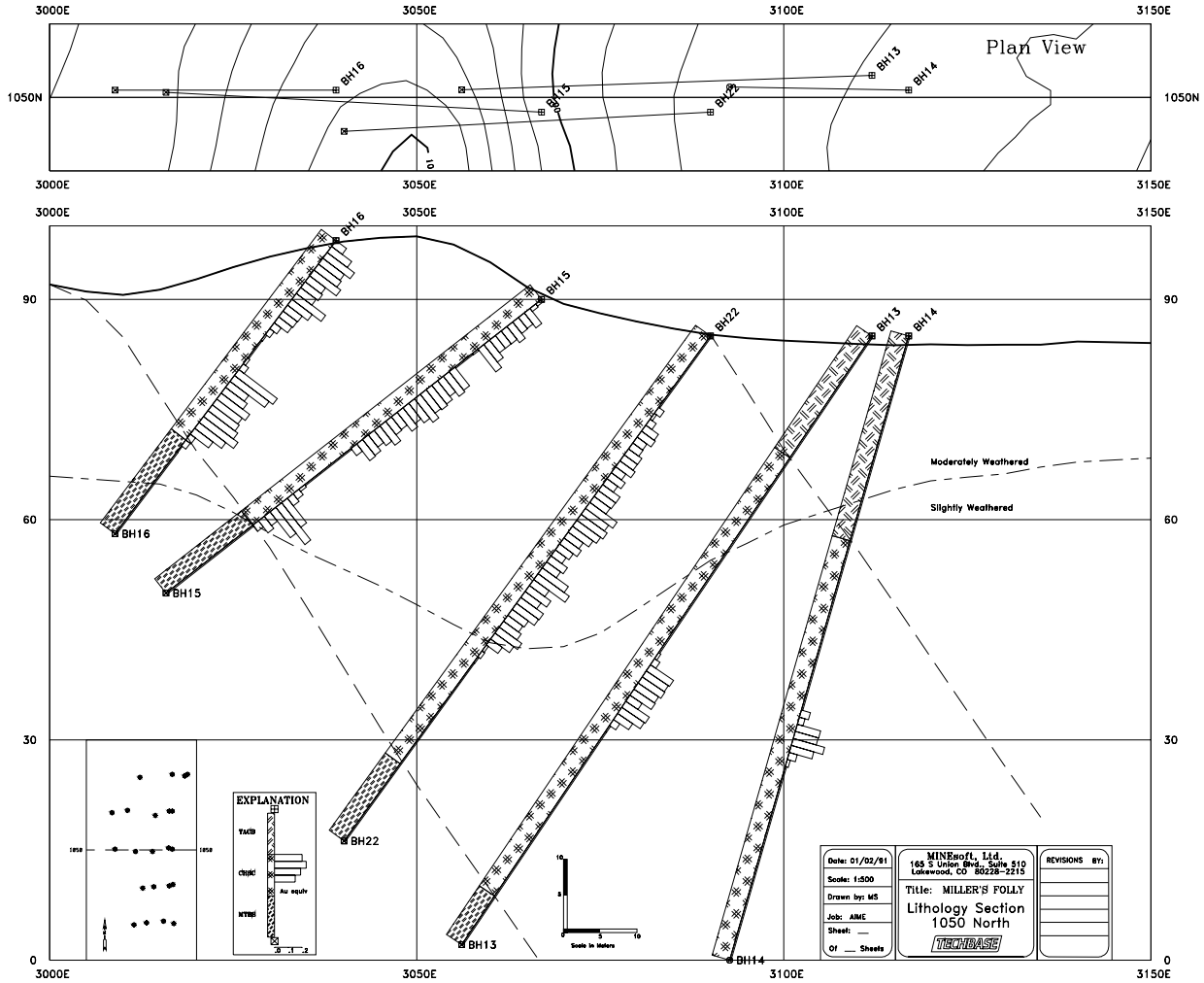
Note: For a list of available colors and patterns and their corresponding numbers please see **“List of Standard TECHBASE values” on page 0-27**

When a data file such as the following is loaded into a database, the records in the “lith_patt” field are automatically assigned a pattern number according to the *Values* list. In the database dictionary an ampersand (&) appears next to “lith_patt” indicating the field class is MEASURED.

id	from	to	lith_patt
BH16	0	33	BASALT

BH16	33	50	GRANITE

After creating the measured fields wherever *Color* or *Fill Style* is a choice, you may type in the name of the MEASURED field and the correct colors and patterns will automatically be filled in for that choice. For example, in the *Section* program under the *Holes, Values* choice you can type in the field "lith_color" for *Color* and the field "lith_patt" for *Fill Style*. When the lithology type changes, the pattern will also change. The same is true for the colors. Using a fieldname instead of an actual pattern number or color makes it possible to draw all the color and pattern changes with one draw operation. The cross section below was created using MEASURED fields to change the pattern number and the color when the lithology type changes.



For additional information on MEASURED Fields **"TECHBASE Fields" on page 0-7** and **"Fields" on page tb-23**.

