



BRONX SILICA STOCKPILE DRAINAGE

CASE STUDY

PROJECT:	Bronx Silica Quarry, Bronkhorstspruit, Mpumalanga	DATE:	February 2000
CLIENT:	Samrec Ltd	QUANTITY:	7 600m ² , 700m & 3 750m ²
CONSULTANT:	Mark Harris	PRODUCT:	Kaytape S120/S270, GEOPIPE M65 & DN3 Flownet
CONTRACTOR:	Bronx Mining Services		

This contract involved Bronx Mining, (a division of Samrec) and Kaytech Johannesburg where the local manager, Peter Davies submitted a design proposal, at the request of the client's technical staff.

The project involved the construction of a pervious floor to drain a Silica sand stockpile at the Bronx Silica quarry near Bronkhorstspruit. The floor area covered was 3 800 m².

A Bentonite modified low-permeability soil floor of 150 mm thickness was constructed. A herringbone drainage system was then constructed on top of a separation layer of **Kaytape S120. GEOPIPE M65** was laid surrounded by 13,2 mm size stone. **DN3 Flownet** was laid on top of this system to act as a blanket drainage core. A layer of **Kaytape S270** was laid next, to act as a separator between the sand and the **Flownet** core. A 300mm telltale layer of Silica sand was put on top of the whole system. The stockpile was then constructed over this system, which proved to work very well.

