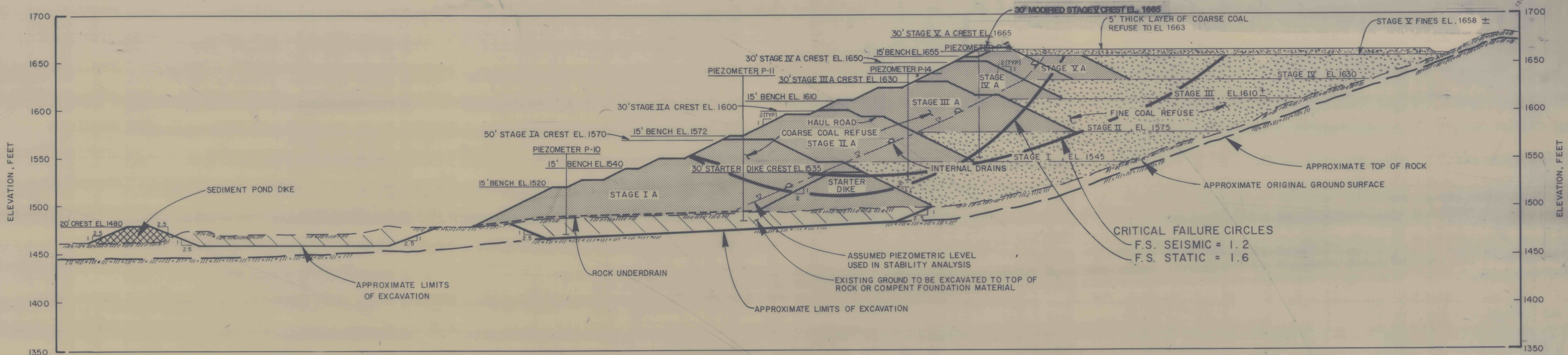


MATERIAL PROPERTIES USED IN STABILITY ANALYSES

MATERIAL	TOTAL UNIT WEIGHT (PCF)	SATURATED UNIT WEIGHT (PCF)	EFFECTIVE SHEAR STRENGTH PARAMETERS	
			FRICITION ANGLE (DEGREES)	COHESION (PSF)
COARSE COAL REFUSE	100	110	35	0
FINE COAL REFUSE	80	80	25/18 ⁽²⁾	0
NATURAL SOIL ⁽¹⁾	98	98	30	0

(1) FOR DESCRIPTION OF NATURAL SOILS, SEE DRAWINGS NOS. 78-359-E5 AND E6.

(2) A FRICTION ANGLE OF 25 DEGREES WAS USED IN THE STATIC ANALYSES AND 18 DEGREES IN THE SEISMIC ANALYSES.

NOTES

- ALL ELEVATIONS ARE FEET ABOVE MSL, USGS DATUM.
- THE STABILITY ANALYSIS WAS PERFORMED USING A COMPUTERIZED VERSION OF BISHOP'S SIMPLIFIED METHOD OF SLICES.
- PIEZOMETRIC LEVELS USED IN THE ANALYSIS ARE SHOWN ON EACH SECTION.
- LIMITS OF FINE COAL REFUSE ARE APPROXIMATED FROM BORING LOGS AND SITE OBSERVATIONS.
- IN THE SEISMIC ANALYSIS A HORIZONTAL ACCELERATION OF 0.05g WAS APPLIED.
- MATERIAL PROPERTIES USED IN THE SLOPE STABILITY ANALYSIS ARE BASED ON FIELD AND LABORATORY TEST DATA AND PREVIOUS TEST RESULTS FOR SIMILAR MATERIALS.

DRAWING NO. 78-359-E19
SHEET NO.
FIGURE NO. 21

SECTIONS A-A, B-B AND
STABILITY ANALYSIS

BETHLEHEM MINE No. 101
CENTURY, WEST VIRGINIA

PREPARED FOR

BETHLEHEM MINES CORPORATION
BRIDGEPORT, WEST VIRGINIA

D'APPOLONIA

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