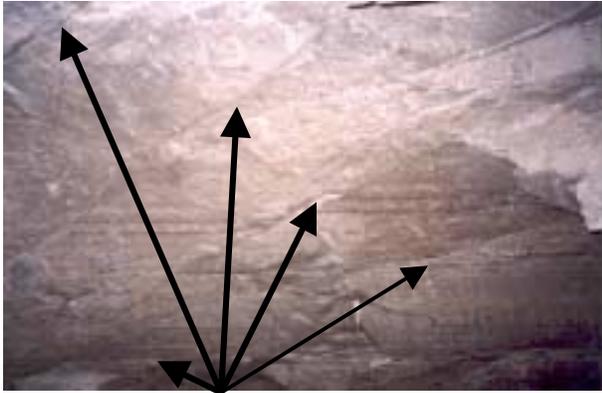# HALT

HAZARD **A**LERT **L**IVE **T**OMORROW

ROOF FALL SAFETY ALERT
ROOF CONTROL – GEOLOGICAL CONDITIONS

**Multiple cracks in roof (evidence of slips) located immediately outby fall area**

Shuttle car and continuous miner entrapped by roof fall

Outby end of roof fall - victim was 10 ft. inby this point

Roof falls resulting from adverse geological (slip) conditions continue to cause serious disabling injuries and fatalities in Virginia coal mines. A continuous miner operator received fatal injuries and a repairman was entrapped by a roof fall high angle slip. (photos above)
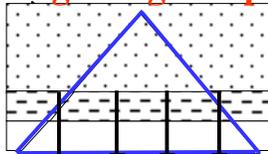
REMEMBER: The coal mines in Southwest Virginia have the most severe geological fault conditions east of the Mississippi River. We must recognize and respect geological conditions to prevent roof fall accidents.
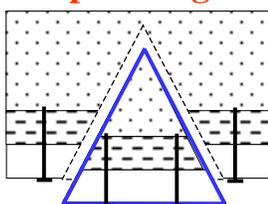
GEOLOGICAL CONDITIONS:

Low Angle Slip
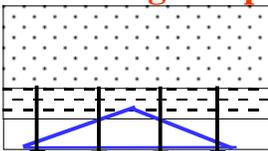
High Angle Slip

Slip Falling

- ❖ All underground coal mines in Virginia are subject to linear fracture zones that can cause adverse roof conditions.

- ❖ Adverse geological formations create cracks, faults, slips, coal streaks, and other hazards that must be controlled.

- ❖ Geological formations can abruptly change mine roof conditions.

- ❖ Mining above, below, or adjacent to other active or abandoned mines can directly affect roof control safety.

- ❖ Outcrop distances and overburden thickness are critical factors that affect mine roof stability.

- ❖ Transition zones where roof strata changes from shale to sandstone, slate to shale, or slate to sandstone increase the potential for roof falls.

- ❖ Thorough roof examinations and testing and roof support evaluations are necessary to help identify potential mine roof failure.

- ❖ Always communicate changes in mine roof conditions to all miners and report hazardous conditions to the mine foreman immediately.

PLEASE POST "2003"

For additional information or assistance, contact the Division of Mines, Big Stone Gap (276) 523-8227 or Keen Mountain Field Office (276) 498-4533

ACCIDENT REDUCTION PROGRAM

DMME Virginia Department of Mines Minerals and Energy