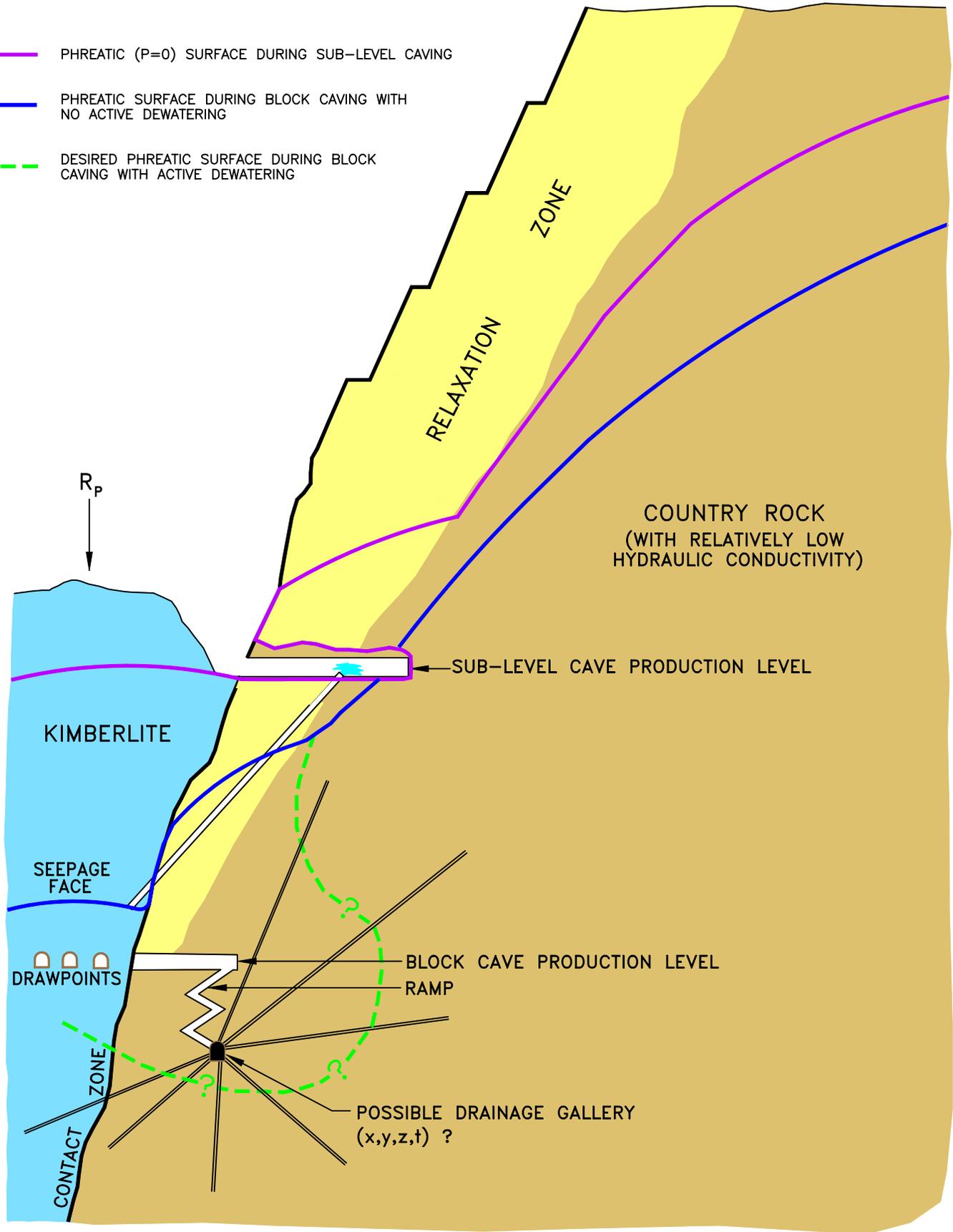


- Rock matrix relaxation around underground drifts and mine pits is responsible for creating a zone (relaxation zone) in which the hydraulic conductivity will be greatly enhanced. The extent of this enhancement is not well understood.
- If the relaxation zone's enhancement to the hydraulic conductivity is known, dewatering systems for mines will be more effectively designed. This will in turn result in better miners' safety and more financial saving in the installation of the dewatering system.
- The Homestake mine site provides an excellent opportunity for hydraulic testing of the relaxation zone, because it has the following characteristics:
 1. The mine has different mine features and used several mining techniques, e.g. open pit, stoping, drifts, caverns, ...etc, which will help in assessing the relaxation versus the size, the method of excavation, and shape of the opening.
 2. The mine has a long history, which will help in assessing the progression of relaxation versus time.

- PHREATIC (P=0) SURFACE DURING SUB-LEVEL CAVING
- PHREATIC SURFACE DURING BLOCK CAVING WITH NO ACTIVE DEWATERING
- - - DESIRED PHREATIC SURFACE DURING BLOCK CAVING WITH ACTIVE DEWATERING



| | | | |
|----------|----------|------------|----------|
| JOB NO. | HCI-1770 | DATE: | 5/2/00 |
| BY: | LCA | DWG FILE: | CONCMODL |
| DRAWN: | SAC | PLOT FILE: | CONCMODL |
| CHECKED: | | PLOT DATE: | 5/3/00 |