

Files PZELEVB.XLS, PZELEVC.DOC and PZELEVD.DOC contain the results of a releveling survey of the piezometer rims on transects B, C, and D done in June of 1996 by Mr. Michael Busby in order to determine whether the piezometer rims had remained at a common elevation since their installation in the summer of 1993. The data in these files are based on a topographic resurvey of the piezometer station elevations in May of 1996. The results of the topo resurvey are given in file TOPODATA.DAT in subdirectory TOPOS along with the original 1993 topo survey by R. Keenan. The original 1993 topo survey is probably more accurate because it was conducted by more experienced personnel using more accurate equipment (TopCon total station versus leveling telescope). As indicated in the README.DOC file in the TOPOS subdirectory, the 1993 survey was referenced to the BARUCH1932 geodetic survey benchmark near the intersection of Marsh and Clambank Roads whereas the 1996 survey was referenced to a local temporary benchmark which appears to be about 37 cm higher than the BARUCH1932 benchmark. In both surveys the piezometer surveyed was always the deepest at a given station (8, 12 or 16 foot).

After the topo resurvey Mr. Busby, at each station, stretched a taut string from the 2ft piezometer pipe to the deepest piezometer pipe (usually a distance of 10 ft) and leveled it with a carpenter's level. He then measured the distance at each piezometer pipe between the ground surface and the level line and between the level line and the pipe rim. The data columns in the XLS files are:

1=station identifier

2=nominal piezometer depth(in ft)

3=elevation of the level line relative to the temporary benchmark(in meters)

4=distance of level line above ground(m)

5=elevation of the ground(m)

6=distance of rim above level line(m)

7=elevation of the rim relative to the temporary benchmark(m).

As can be seen, the rim elevations at a station are generally consistent with maximum differences usually less than 3 cm. Notable exceptions are stations B280, C90, C190, D294, D386 and D474. **At C90 the 12ft piezometer was not trimmed and is 19.5 cm higher than the common rim elevation. The water level data in the CHEADDAT and CDIPSTIK files have been corrected for this error.** There are also consistent differences between some stations as for example between D000 and D050. In most cases large between station differences coincide with large differences between the 1993 and 1996 station elevations. If the 1993 station elevations were used instead of the 1996 elevations, these between station discrepancies would largely disappear with the exception of B000 where the ground elevation (201 cm) is nearly as high as the rim elevations at the other stations (204 cm relative to BARUCH1932 = 260cm AMSL). **Thus the rims at B00 were intentionally trimmed to a higher elevation (201+25=226cm).** For additional methodology information, see section 2.5.1.3 of the Metadata document.