
README file for archived SAFOD raw tilt data from 2005 to 2007

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- Included in this package are following:
  README file, raw UPD format files, documenation of UPD file format

- File nomenclature syntax is:

      {r|t|d|p}-{PILOT | MAIN}TM[_BOTTOM | _UPPER]_YYYYMMDD_[H]HMM.UPD

      Example: One tiltmeter in the main hole:
      r-MAINTM_YYYYMMDD_[H]HMM.UPD

      Example: Two tiltmeters in the pilot hole:
      r-PILOTTM_UPPER_YYYYMMDD_[H]HMM.UPD
      and
      r-PILOTTM_BOTTOM_YYYYMMDD_[H]HMM.UPD

The part between the last underscore and the file extension is the time stamp. Unfortunately there is no leading zero for 0:00 to 9:59.

Pinnacle indicated that the time stamp in the "r-" file names do NOT correspond to the time stamp in the first block's header. The time stamp in the file name is created at the moment when the file is finalized and prepared for storage and transmission in order to create unique file names. It's always a couple of seconds after the time of the last data point in the file. It is in usually in local time (PDT/PST). The time stamp of the data points (block header) are in UTC. The block header should have a tag(code #9) which describes the offset to local time (usually -7 or -8 hours). However it turns out this convention is not always followed. For "p_" files the timestamp part of the name is usually the end month and day. Anyway bottom line is that the filenames are unique and that they cover all the available data, unfiltered whenever available, except for 2005 where only filtered data seems to be available.

Basically a "p-" file grows infinitely until data acquisition is stopped. The "t-" files are the daily files. Once they are remove from the data acquisition folder they are renamed to "r-" to keep track of what files have been transferred. The "r-" prefix stands for "polled", which means that this is regular real-time data as recorded during the deployment.

The "d-" prefix stands for "downloaded". It means that data got downloaded from the instruments internal memory - probably after the deployment.

If there are time spans in which only "d-" data is available it indicates that there was a communication problem during the deployment. After the deployment we tried to fill these data gaps with downloaded data. The time stamps of "d-" files are generated by the instrument - it's internal clock is not as precise as the computer's clock.

- Which files to use:
      Only "r-": that's the regular condition; use the data from the "r-" file
      Only "d-": data gaps have been filled with downloaded data; use the data from the "d-" file
      Both "r-" and "d-": Use the data from the "r-" file

- The UPD file format is described in the following MS-Word document:
UPD_File_Format.doc