Additional update: 11Febraury 2025 – Depth units corrected from n/a to metres.

1979-041 Knight Inlet

UPDATE – G. Gatien

March 2, 2022

All pressure values in the CTD files were 0.

To correct these values, data from other cruises in the same project were studied.

There was also a report available with data from this cruise, but it had only a sample of data and lower precision than in the files archived at IOS.

The records appear to be in roughly 1m steps, not 1db.

I removed the pressure channel.

I added a record # that is in essence Depth + 1.

I added a channel I named Pressure.

I recalibrated Depth by subtracting 1.

To calculate pressure I opened another file from Knight Inlet that had both pressure and depth and found a linear fit.

(The proper calculation is very difficult but by picking data from the same area I got around the dependence on latitude. My estimate is good enough for this level of precision.)

I used that result to derive pressure from depth.

I compared a selection of the resulting CTD files with the report. The only level at which there are detectable differences are right at the surface. This is likely due to how the surface value was selected for the report.

One good check is that the report lists maximum depth and that matched the maximum depth in the new files.

I believe the estimates of pressure are good to +/- 1db. They probably were not exact integer depths, so there will be some error.

These files give much better resolution of temperature and salinity and are more useful than just using the report data.

So I suggest you use them to replace the files in the archive, which are useless.

I put a note in the header about how the files were recovered.