netcdf Continuous\_Water\_Pressure\_Logger\_Data {

dimensions:

time = < dim1 >;//.................................................... Number of time steps in the time series

uint64 time(time) ;//…………………………………………………………………………………………………………………………. Uint64 or double gives better than millisecond accuracy.

time:long\_name = "" ;//..................................... RECOMMENDED - Reserve.

time:standard\_name = "time" ;//............................. REQUIRED - Do not change

time:units = "milliseconds since 1970-01-01 00:00:00 0:00" ;//REQUIRED - CF compliant. November 17, 1858?

time:calendar = "gregorian" ;//.............................. REQUIRED - Acceptable for dates after 1582.

time:axis = "T" ;//.......................................... REQUIRED - Do not change.

time:ancillary\_variables = "" ; //........................... RECOMMENDED – Reserve.

time:comment = "" ; //....................................... RECOMMENDED – Reserve.

float lat ;//........................................................ Float gives better than millimeter accuracy

lat:long\_name = "Latitude of Sensor" ; //.................... RECOMMENDED – Reserve.

lat:standard\_name = "latitude" ; //.......................... REQUIRED - Do not change.

lat:units = "degrees\_north" ; //............................. REQUIRED - CF compliant.

lat:axis = "Y" ; //.......................................... REQUIRED - Do not change.

lat:valid\_min = -90.0f ; //.................................. RECOMMENDED – Any station latitude above the South Pole.

lat:valid\_max = 90.0f ; //................................... RECOMMENDED – Any station latitude below the North Pole.

lat:\_FillValue = 0.0f;//..................................... REQUIRED - if there is a missing value.

lat:ancillary\_variables = "" ; //............................ RECOMMENDED – Reserve.

lat:comment = "Latitude 0 equals equator" ; //............... RECOMMENDED – Define latitude system.

float lon ; //.........................................................Float gives better than millimeter accuracy.

lon:long\_name = "Longitude of Sensor" ; //................... RECOMMENDED – Reserve.

lon:standard\_name = "longitude" ; //......................... REQUIRED - Do not change.

lon:units = "degrees\_east" ; //.............................. REQUIRED - CF compliant

lon:axis = "X" ; //.......................................... REQUIRED - Do not change.

lon:valid\_min = -180.0f ; //................................. RECOMMENDED – Any station longitude.

lon:valid\_max = 180.0f ; //.................................. RECOMMENDED – Any station longitude.

lon:\_FillValue = 0.0f;//..................................... REQUIRED - if there is a missing value.

lon:ancillary\_variables = "" ; //............................ RECOMMENDED – Reserve.

lon:comment = "Longitude 0 equals Prime Meridian" ; //....... RECOMMENDED – Define longitude system.

float z ;//........................................................... Float gives better than millimeter accuracy.

z:long\_name = "Altitude of Sensor" ; //...................... RECOMMENDED – Reserve.

z:standard\_name = "altitude" ; //............................ REQUIRED - CF compliant.

z:units = "meters" ; //...................................... REQUIRED - UDUNITS compliant.

z:axis = "Z" ; //............................................ REQUIRED - Do not change.

z:positive = "up" ; //....................................... REQUIRED - CF compliant.

z:valid\_min = -11000.0f ; //................................. RECOMMENDED – Any station above the Earth’s surface.

z:valid\_max = 9000.0f ; //................................... RECOMMENDED – Any station below 1km above Mount Everest

z:\_FillValue = 0.0f; //...................................... REQUIRED - If there is a missing value.

z:ancillary\_variables = "" ; //.............................. RECOMMENDED – Reserve.

z:comment = "Altitude above NAVD88(?)" ; //.................. RECOMMENDED – Define altitude system.

float pressure(time) ;//............................................. Float gives better than ?? accuracy

pressure:long\_name = "" ; //................................. RECOMMENDED - Provide a descriptive, long name.

pressure:standard\_name = "pressure" ; //..................... REQUIRED - Checking name table for CF ocmpliance.

pressure:nodc\_name = "PRESSURE" ; //......................... RECOMMENDED – Need to check.

pressure:units = "Pascals" ; //.............................. REQUIRED - Use UDUNITS compatible units.

pressure:scale\_factor = 1.0f ; //............................ REQUIRED - Standard netCDF convention for unscaled data

pressure:add\_offset = 0.0f ; // ............................. REQUIRED – Standard netCDF convention for no-offset data

pressure:\_FillValue = 0.0f ; //................ REQUIRED if there is a missing value.

pressure:valid\_min = -10000.0f ; //............ RECOMMENDED – Whatever makes sense here.

pressure:valid\_max = 10000.0f ; //............. RECOMMENDED – Whatever makes sense here.

pressure:coordinates = "time lat lon z" ; //... REQUIRED - CF compliant.

===================================================== Still working on this below this point =====================================

pressure:grid\_mapping = "crs" ; //............. RECOMMENDED - It is highly recommended that the data provider put the data in a well known geographic coordinate system and provide the details of the coordinate system.

pressure:source = "" ; //...................... RECOMMENDED - The method of production of the original data

pressure:references = "" ; //.................. RECOMMENDED - Published or web-based references that describe the data or methods used to produce it.

pressure:cell\_methods = "" ; // ............... RECOMMENDED - Use the coordinate variables to define the cell values (ex., "time:point lon:point lat:point z:point").

pressure:ancillary\_variables = "instrument\_parameter\_variable platform\_variable boolean\_flag\_variable enumerated\_flag\_variable" ; //......... RECOMMENDED - Identify the variable name(s) of the flag(s) and other ancillary variables relevant to this variable. Use a space-separated list.

pressure:platform = "platform\_variable" ; //... RECOMMENDED - Refers to name of variable containing information on the platform from which this variable was collected.

pressure:instrument = "instrument\_variable";//...RECOMMENDED - Refers to name of variable containing information on the instrument from which this variable was collected.

pressure:comment = "" ; //..................... RECOMMENDED - Set default to “Comments re: pressure”.

byte boolean\_flag\_variable(time); //............................. A boolean flag variable, in which each bit of the flag can be a 1 or 0.

boolean\_flag\_variable:standard\_name= "" ; //................. RECOMMENDED - This attribute should include the standard name of the variable which this flag contributes plus the modifier: "status\_flag" (for example, "sea\_water\_temperature status\_flag"). See CF standard name modifiers.

boolean\_flag\_variable:long\_name = "" ; //.................... RECOMMENDED - Provide a descriptive, long name for this variable.

boolean\_flag\_variable:flag\_masks = ; //................... REQUIRED - Provide a comma-separated list describeing the binary condition of the flags.

boolean\_flag\_variable:flag\_meanings = "" ; //................ REQUIRED - Provide a comma-separated list of flag values that map to the flag\_masks.

boolean\_flag\_variable:references = "" ; //................... RECOMMENDED - Published or web-based references that describe the data or methods used to produce it.

boolean\_flag\_variable:comment = "" ; //...................... RECOMMENDED - Add useful, additional information here.

int enumerated\_flag\_variable(time); //...................... An enumerated flag variable, in which numeric values refer to defined, exclusive conditions.

enumerated\_flag\_variable:standard\_name= "" ; //.............. RECOMMENDED - This attribute should include the standard name of the variable which this flag contributes plus the modifier: "status\_flag" (for example, "sea\_water\_temperature status\_flag"). See CF standard name modifiers.

enumerated\_flag\_variable:long\_name = "" ; //................. RECOMMENDED - Provide a descriptive, long name for this variable.

enumerated\_flag\_variable:flag\_values = ; //............... REQUIRED - Provide a comma-separated list of flag values that map to the flag\_meanings.

enumerated\_flag\_variable:flag\_meanings = "" ; //............. REQUIRED - Provide a space-separated list of meanings corresponding to each of the flag\_values

enumerated\_flag\_variable:references = "" ; //................ RECOMMENDED - Published or web-based references that describe the data or methods used to produce it.

enumerated\_flag\_variable:comment = "" ; //................... RECOMMENDED - Add useful, additional information here.

int platform\_variable; //............................................ RECOMMENDED - a container variable storing information about the platform.

platform\_variable:long\_name = "" ; //........................ RECOMMENDED - Provide a descriptive, long name for this variable.

platform\_variable:comment = "" ; //.......................... RECOMMENDED - Add useful, additional information here.

platform\_variable:call\_sign = "" ; //........................ RECOMMENDED - This attribute identifies the call sign of the platform.

platform\_variable:ices\_code = ""; //......................... RECOMMENDED - This attribute identifies the ICES code of the platform. Look at http://www.ices.dk/datacentre/requests/Login.aspx to find if ICES codes are available.

platform\_variable:wmo\_code = "";//........................... RECOMMENDED - This attribute identifies the wmo code of the platform. Information on getting WMO codes is available at http://www.wmo.int/pages/prog/amp/mmop/wmo-number-rules.html

platform\_variable:imo\_code = "";//.......................... RECOMMENDED - This attribute identifies the International Maritime Organization (IMO) number assigned by Lloyd's register.

int instrument\_parameter\_variable(timeSeries); //........................... RECOMMENDED - an instrument variable storing information about a parameter of the instrument used in the measurement, the dimensions don't have to be specified if the same instrument is used for all the measurements.

instrument\_parameter\_variable:long\_name = "" ; //............ RECOMMENDED - Provide a descriptive, long name for this variable.

instrument\_parameter\_variable:comment = "" ; //.............. RECOMMENDED - Add useful, additional information here.

int crs; //.......................................................... RECOMMENDED - A container variable storing information about the grid\_mapping. All the attributes within a grid\_mapping variable are described in http://cf-pcmdi.llnl.gov/documents/cf-conventions/1.5/cf-conventions.html#appendix-grid-mappings . For all the measurements based on WSG84, the default coordinate system used for GPS measurements, the values shown here should be used.

crs:grid\_mapping\_name = "latitude\_longitude"; //............. RECOMMENDED

crs:epsg\_code = "EPSG:4326" ; //............................. RECOMMENDED - European Petroleum Survey Group code for the grid mapping name.

crs:semi\_major\_axis = 6378137.0 ; //......................... RECOMMENDED

crs:inverse\_flattening = 298.257223563 ; //.................. RECOMMENDED

// global attributes:

:Conventions = "CF-1.6" ; //......................................... REQUIRED - Always try to use latest value. (CF)

:Metadata\_Conventions = "Unidata Dataset Discovery v1.0" ; //........ REQUIRED - Do not change. (ACDD)

:featureType = "timeSeries" ; //..................................... REQUIRED - CF attribute for identifying the featureType.

:cdm\_data\_type = "Station" ; //...................................... REQUIRED (ACDD)

:nodc\_template\_version = "NODC\_NetCDF\_TimeSeries\_Orthogonal\_Template\_v1.0" ; //....... REQUIRED (NODC)

:standard\_name\_vocabulary = "CF-1.6" ; //............................ REQUIRED - If using CF standard name attribute for variables. (ACDD)

:title = "" ; //..................................................... RECOMMENDED - Provide a useful title for the data in the file. (ACDD)

:summary = "" ; //................................................... RECOMMENDED - Provide a useful summary or abstract for the data in the file. (ACDD)

:source = "" ; //.................................................... RECOMMENDED - The input data sources regardless of the method of production method used. (CF)

:platform = "platform\_variable" ; //................................. RECOMMENDED - Refers to a variable containing information about the platform. May also put this in individual variables. Use NODC or ICES platform table. (NODC)

:instrument = "instrument\_parameter\_variable" ; //................... RECOMMENDED - Refers to a variable containing information about the instrument. May also put this in individual variables. Use NODC or GCMD instrument table. (NODC)

:uuid = "" ; //...................................................... RECOMMENDED - Machine readable unique identifier for each file. A new uuid is created whenever the file is changed. (NODC)

:sea\_name = "" ; //.................................................. RECOMMENDED - The names of the sea in which the data were collected. Use NODC sea names table. (NODC)

:id = "" ; //........................................................ RECOMMENDED - Should be a human readable unique identifier for data set. (ACDD)

:naming\_authority = "" ; //.......................................... RECOMMENDED - Backward URL of institution (for example, gov.noaa.nodc). (ACDD)

:time\_coverage\_start = "" ; //....................................... RECOMMENDED - Use ISO8601 for date and time. (ACDD)

:time\_coverage\_end = "" ; //......................................... RECOMMENDED - Use ISO8601 for date and time.(ACDD)

:time\_coverage\_resolution = "" ; //.................................. RECOMMENDED - For example, "point" or "minute averages". (ACDD)

:geospatial\_lat\_min = 0.0f ; //...................................... RECOMMENDED - Replace with correct value. (ACDD)

:geospatial\_lat\_max = 0.0f ; //...................................... RECOMMENDED - Replace with correct value. (ACDD)

:geospatial\_lat\_units = "degrees\_north" ; //......................... RECOMMENDED - Use UDUNITS compatible units. (ACDD)

:geospatial\_lat\_resolution= "" ; //.................................. RECOMMENDED - For example, "point" or "10 degree grid". (ACDD)

:geospatial\_lon\_min = 0.0f ; //...................................... RECOMMENDED - Replace with correct value. (ACDD)

:geospatial\_lon\_max = 0.0f ; //...................................... RECOMMENDED - Replace with correct value. (ACDD)

:geospatial\_lon\_units = "degrees\_east"; //........................... RECOMMENDED - Use UDUNITS compatible units. (ACDD)

:geospatial\_lon\_resolution= "" ; //.................................. RECOMMENDED - For example, "point" or "10 degree grid". (ACDD)

:geospatial\_vertical\_min = 0.0f ; //................................. RECOMMENDED - Replace with correct value. (ACDD)

:geospatial\_vertical\_max = 0.0f ; //................................. RECOMMENDED - Replace with correct value. (ACDD)

:geospatial\_vertical\_units = "" ; //................................. RECOMMENDED - Use UDUNITS compatible units. (ACDD)

:geospatial\_vertical\_resolution = "" ; //............................ RECOMMENDED - For exapmple, "point" or "1 meter binned". (ACDD)

:geospatial\_vertical\_positive = "" ; //.............................. RECOMMENDED - Use "up" or "down". (ACDD)

:institution = "" ; //............................................... RECOMMENDED - Institution of the person or group that collected the data. An institution attribute can be used for each variable if variables come from more than one institution. (ACDD)

:creator\_name = "" ; //.............................................. RECOMMENDED - Name of the person who collected the data. (ACDD)

:creator\_url = "" ; //............................................... RECOMMENDED - URL for person who collected the data. (ACDD)

:creator\_email = "" ; //............................................. RECOMMENDED - Email address for person who collected the data. (ACDD)

:project = "" ; //................................................... RECOMMENDED - Project the data was collected under. (ACDD)

:processing\_level = "" ; //.......................................... RECOMMENDED - Provide a description of the processing or quality control level of the data. (ACDD)

:references = "" ; //................................................ RECOMMENDED - Published or web-based references that describe the data or methods used to produce it. (CF)

:keywords\_vocabulary = "" ; //....................................... RECOMMENDED - Identifies the controlled keyword vocabulary used to specify the values within the attribute "keywords". e.g. NASA/GCMD Earth Science Keywords. Version 6.0 (ACDD)

:keywords = "" ; //.................................................. RECOMMENDED - A comma separated list of keywords coming from the keywords\_vocabulary. (ACDD)

:acknowledgment = "" ; //............................................ RECOMMENDED - Text to use to properly acknowledge use of the data. (ACDD)

:comment = "" ; //................................................... RECOMMENDED - Provide useful additional information here. (ACDD and CF)

:contributor\_name = "" ; //.......................................... RECOMMENDED - A comma separated list of contributors to this data set. (ACDD)

:contributor\_role = "" ; //.......................................... RECOMMENDED - A comma separated list of their roles. (ACDD)

:date\_created = "" ; //.............................................. RECOMMENDED - Creation date of the netCDF. Use ISO8601 for date and time. (ACDD)

:date\_modified = "" ; //............................................. RECOMMENDED - Modification date of the netCDF. Use ISO8601 for date and time. (ACDD)

:publisher\_name = "" ; //............................................ RECOMMENDED - Publisher of the data. (ACDD)

:publisher\_email = "" ; //........................................... RECOMMENDED - Email address of the publisher of the data. (ACDD)

:publisher\_url = "" ; //............................................. RECOMMENDED - A URL for the publisher of the data. (ACDD)

:history = "" ; //................................................... RECOMMENDED - Record changes made to the netCDF. (ACDD)

:license = "" ; //................................................... RECOMMENDED - Describe the restrictions to data access and distribution. (ACDD)

:metadata\_link = "" ; //............................................. RECOMMENDED - This attribute provides a link to a complete metadata record for this data set or the collection that contains this data set. (ACDD)

}