Foreign/NODC Data Export Format 08/19/2002
Format of data:

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      write (20,801) irec , xlat , xlon , idate , itime , nlev , npar ,
    &               icode,ifirst , last , ibathy, dsnum

         write(20,802)dbdb5,land,q_dtg,alls99,allt99,
    &  sbad,tbad,sspike,tspike,deep

         write(20,803)lxhdr(1),lxhdr(2),lxhdr(3),lxhdr(4),pophld(4),pophld(5)

801 FORMAT(i9,2f8.2,i8,i6,2i4,4i5,1x,i7)
802 FORMAT(10(i1,1x))
803 FORMAT(6i9)

     DO 300 i = 1 , nlev
       IF ( npar.EQ.2 ) WRITE (20,99009) depth, temp
       IF ( npar.EQ.3 ) WRITE (20,99010) depth, temp, sal
       IF ( npar.EQ.4 ) WRITE (20,99011) depth, temp, sal,ss
 300  CONTINUE

99009 FORMAT (2f8.2)
99010 FORMAT (3f8.2)
99011 FORMAT (4f8.2)
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Definition of variables:

header line 1:
irec = sequential number
xlat = latitude in decimal degrees (Hemisphere Convention: + = N/E
xlon = longitude in decimal degrees - = S/W)
idate = date (YYYYMMDD)
itime = time (HHMMSS)
nlev = number of levels (data cycles) in profile
npar = number of parameters in profile
2 = depth,temperature
3 = depth,temperature,salinity
4 = depth,temperature,salinity,sound speed or
depth,-99.,-99.,sound speed

icode = instrument code

Codes:
0 unknown instrument
1 Message data (regardless of instrument)
2 Mechanical Bathythermograph (MBT)
3 Selected Level BT (SBT)
9 Ship deployed AXBT
10 Some unknown electronic temperature depth instrument
11 Expendable bathythermograph
12 Air deployed expendable bathythermograph
14 Helicopter deployed expendable bathythermograph (HXBT)
15 Expendable sound velocity profiler (XSV)
16 sound velocimeter
18 Time Series XBT (TSXBT)
21 ODOM Digibar
25 Hydrocast; bottles and reversing thermometers
30 Some unknown electronic salinity, temperature, depth instruments
31 Salinity, temperature and depth probe (STD)
32 Low-resolution STD from NODC
33 Conductivity, temperature, depth probe (CTD)
34 CTD with bottles, reversing thermometers
35 CTD time series (YO-YO)
36 Sound velocity, salinity, temp, and depth (SVSTD)
37 Sippican XCTD
38 Seabird CTD SBE-19 Seacat profiler
39 Temperature, salinity microstructure profiler
40 Some unknown current profile instrument
41 Seabird CTD SBE-911 deep ocean
44 Idronaut CTD

60 Some unknown optical profile instruments
ifirst = depth of first measurement in profile
last = depth of last measurement in profile
ibathy = ocean floor depth
dsnum = sequential dataset number

header line 2: flags (0 or 1)

dbdb5 = ocean floor depth not measured, taken from dbdb5
land   = profile over land
q_dtg = questionable date/time
alls99 = all salinity values missing
allt99 = all temperature values missing
sbad   = salinity value out of acceptable range
tbad   = temperature value out of acceptable range
sspike = salinity spike detected (opposite gradients of 2 ppt/m or greater)
tspike = temperature spike detected (opposite gradients of 2 degC/m or greater)
deep   = profile too deep for location

header line 3: envelop comparison results

lxhdr(1) = Levitus temperature (0 or 9 digit number)
lxhdr(2) = Levitus salinity (0 or 9 digit number)
lxhdr(3) = GDEM temperature (0 or 9 digit number)
lxhdr(4) = *GDEM salinity (0 or 9 digit number)
pophld(4) = *representative moods profile temperature (0 or 9 digit number)
pophld(5) = *representative moods profile salinity (0 or 9 digit number)
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*not available at present time

9 digit number field breakdown:
digits 1-2 program version (x10)
digit 3 indicates that profile extended past the envelop (0 or 1)
digits 4-5 standard deviation used to expand envelop (x10)
digits 6-8 percent of profile outside envelop used for comparison
digit 9 not used at present time

example of field breakdown:
101501000
10 = program version 1.0
1 = profile extended beyond envelop
50 = standard deviation of 5.0 used for envelop
100 = percent of profile outside of envelop
0 = not used at present time

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data:

depth = depth in meters
temp = temperature in degrees Celcius
sal = salinity
ss = sound speed in meters/sec