Comparison Report

The modifications made

```
# The depths being modified are:
paste(rows_to_modify_as_depths, collapse = ", ")
```

```
## [1] "3m"
```

```
# Are there missing points?
is_missing
```

```
## [1] FALSE
```

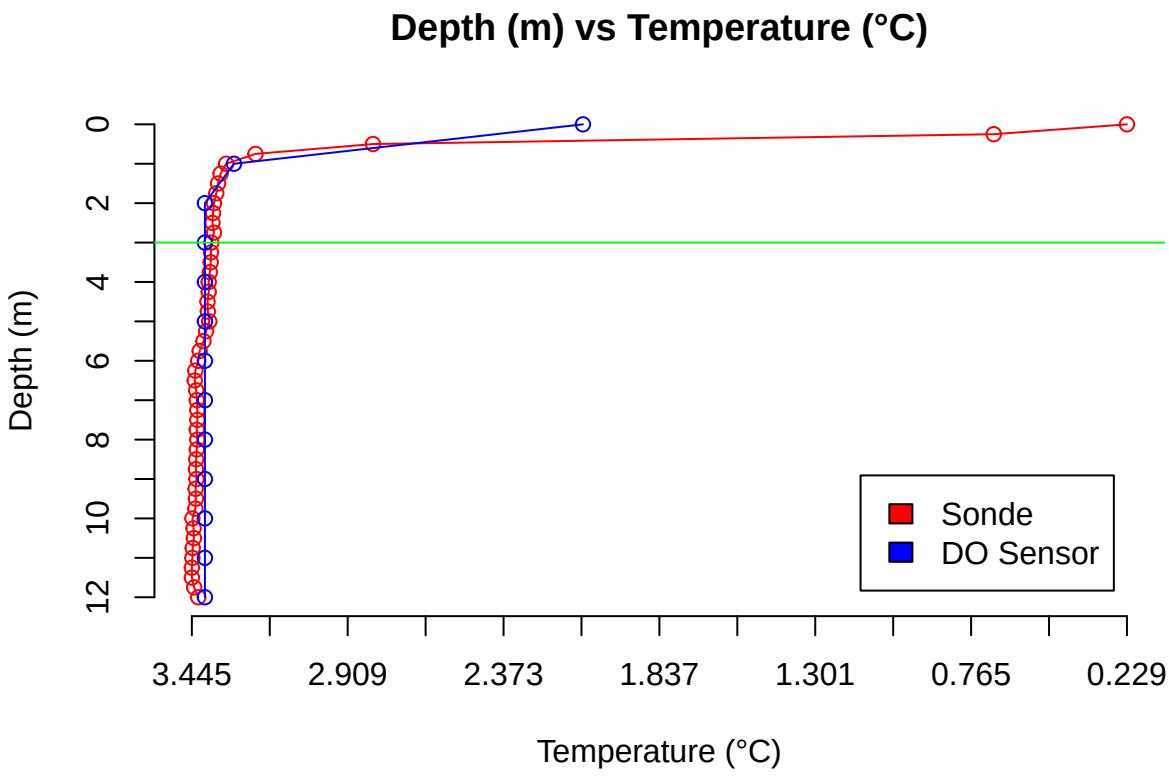
```
# Are there extra points?
is_extra
```

```
## [1] TRUE
```

Draw Depth (m) vs Temperature (°C)

```
# Depths vs Temperature Graph

depth_sonde <- seq(0, 12, 0.25)
temp_sonde <- error_df$temp_degC

temp_do_sensor <- do_sensor_df$Temp_C_DOProbe

depth_do_sensor <- do_sensor_df$Depth_m

# Start the creation of the plot
# The max and min points for each graph
max_depth <- max(depth_sonde, depth_do_sensor, na.rm = TRUE)
min_depth <- min(depth_sonde, depth_do_sensor, na.rm = TRUE)
max_temp <- max(temp_sonde, temp_do_sensor, na.rm = TRUE)
min_temp <- min(temp_sonde, temp_do_sensor, na.rm = TRUE)

# Draw the empty plot
plot(
  c(min_temp, max_temp),
  c(min_depth, max_depth),
  type = "n",
  xlab = "Temperature (°C)", ylab = "Depth (m)",
  main = "Depth (m) vs Temperature (°C)",
  xlim = c(max_temp, min_temp), # Invert the x-axis
  ylim = c(12, 0), # Invert the y-axis
  axes = FALSE # Don't draw the axes since we already draw them
)
```

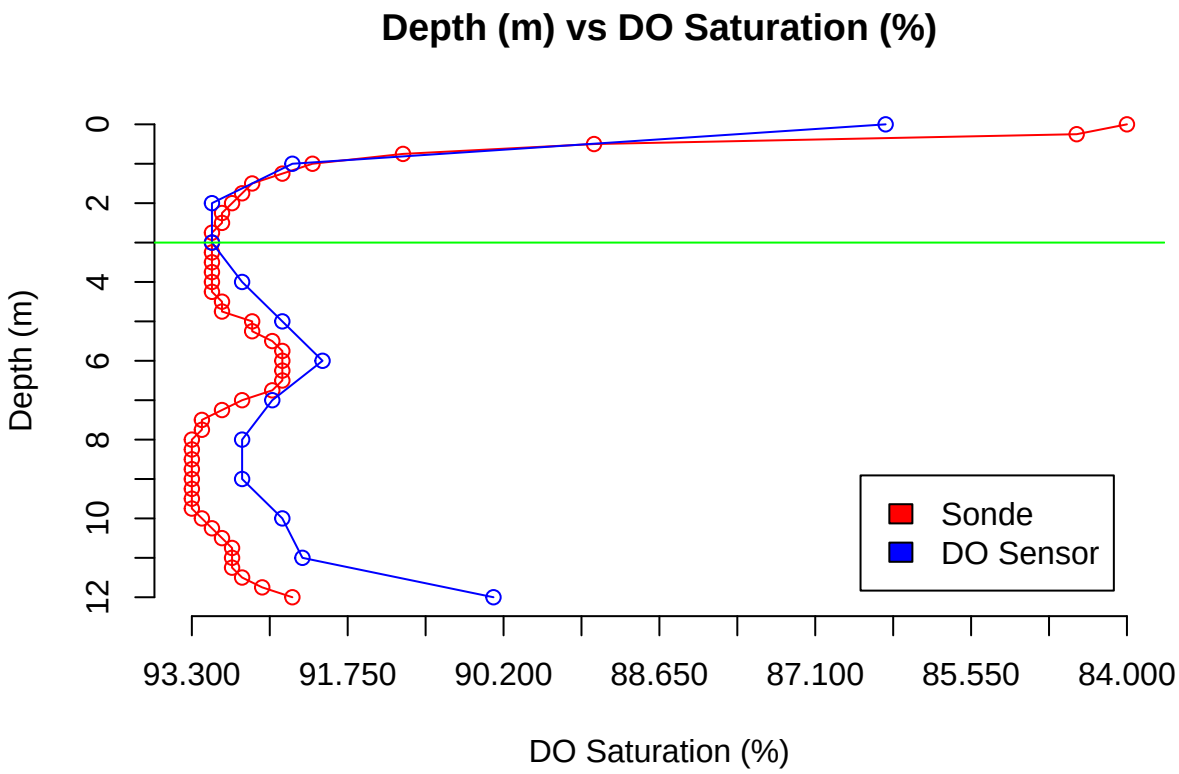
```r
# Draw the axes
# x-axis
axis(1, at = seq(min_temp, max_temp, (max_temp - min_temp) / 12))

# y-axis
axis(2, at = 0:12)

# Add the first graph
points(temp_sonde, depth_sonde, col = "red")

# Connect the points with lines
lines(temp_sonde, depth_sonde, col = "red")

# And draw the 2nd graph
# Start with the points
points(temp_do_sensor, depth_do_sensor, col = "blue")

# Then, connect them with lines
lines(temp_do_sensor, depth_do_sensor, col = "blue")

# Draw horizontal lines showing which depth was modified
abline(h = (rows_to_modify - 1) / 4, col = "green")

# Add a legend to the graph
legend(
  "bottomright",
  inset = 0.05,
  legend = c("Sonde", "DO Sensor"),
  fill = c("red", "blue")
)
```



Draw Depth (m) vs DO Saturation (%)

```
# Depths vs DO Saturation Graph

do_sat_sonde <- error_df$doSaturation_percent

do_sat_do_sensor <- do_sensor_df$DO_Sat_Percent

# Start the creation of the plot
# The max and min points for each graph
max_do_sat <- max(do_sat_sonde, do_sat_do_sensor, na.rm = TRUE)
min_do_sat <- min(do_sat_sonde, do_sat_do_sensor, na.rm = TRUE)

# Draw the empty plot
plot(
  c(min_do_sat, max_do_sat),
  c(min_depth, max_depth),
  type = "n",
  xlab = "DO Saturation (%)", ylab = "Depth (m)",
  main = "Depth (m) vs DO Saturation (%)",
  xlim = c(max_do_sat, min_do_sat), # Invert the x-axis
  ylim = c(12, 0), # Invert the y-axis
  axes = FALSE # Don't draw the axes since we already draw them
)
```

```r
# Draw the axes
# x-axis
axis(1, at = seq(min_do_sat, max_do_sat, (max_do_sat - min_do_sat) / 12))

# y-axis
axis(2, at = 0:12)

# Add the first graph
points(do_sat_sonde, depth_sonde, col = "red")

# Connect the points with lines
lines(do_sat_sonde, depth_sonde, col = "red")

# And draw the 2nd graph
# Start with the points
points(do_sat_do_sensor, depth_do_sensor, col = "blue")

# Then, connect them with lines
lines(do_sat_do_sensor, depth_do_sensor, col = "blue")

# Draw horizontal lines showing which depth was modified
abline(h = (rows_to_modify - 1) / 4, col = "green")

# Add a legend to the graph
legend(
  "bottomright",
  inset = 0.05,
  legend = c("Sonde", "DO Sensor"),
  fill = c("red", "blue")
)
```


Depth (m) vs DO Saturation (%)
Depth (m)
0
2
4
6
8
10
12
93.300
91.750
90.200
88.650
87.100
85.550
84.000
DO Saturation (%)
Sonde
DO Sensor