TEMPEST_FW_Well_TSS_20251110

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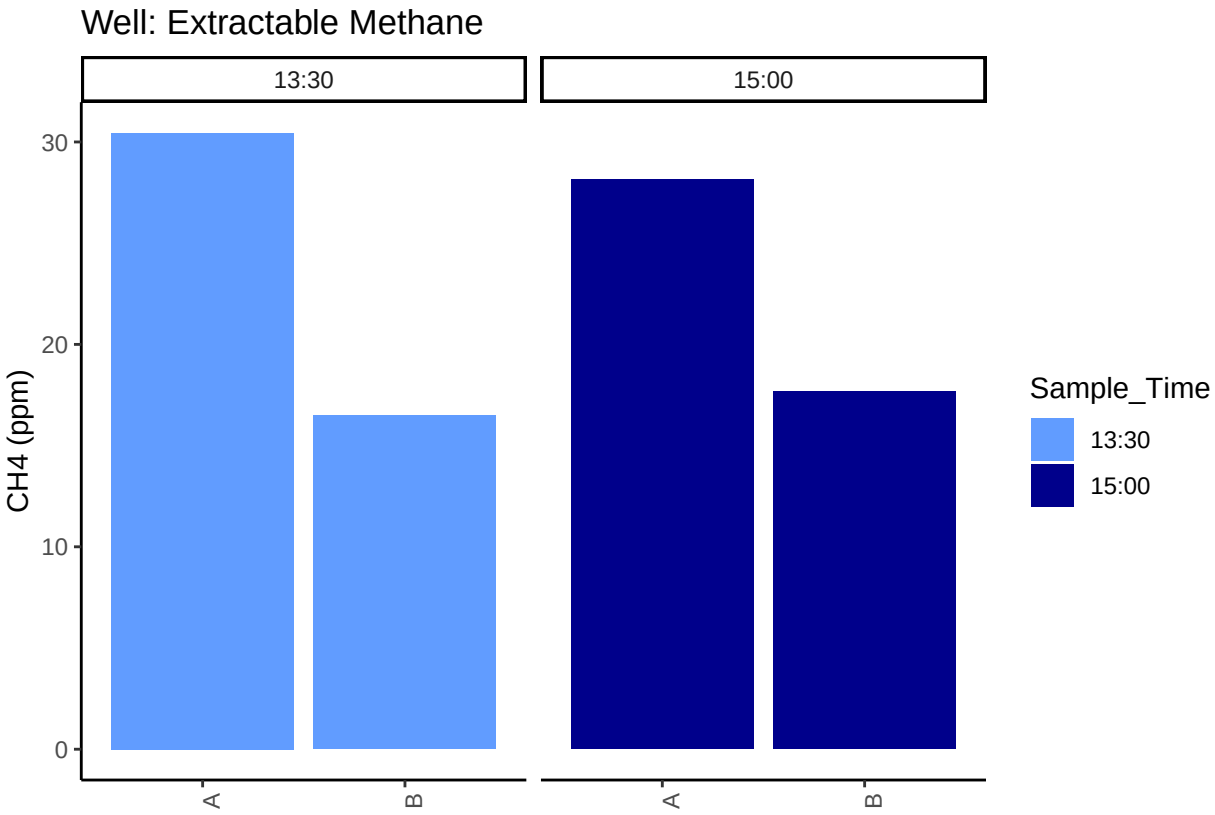
Contents

0.1 GHG Data

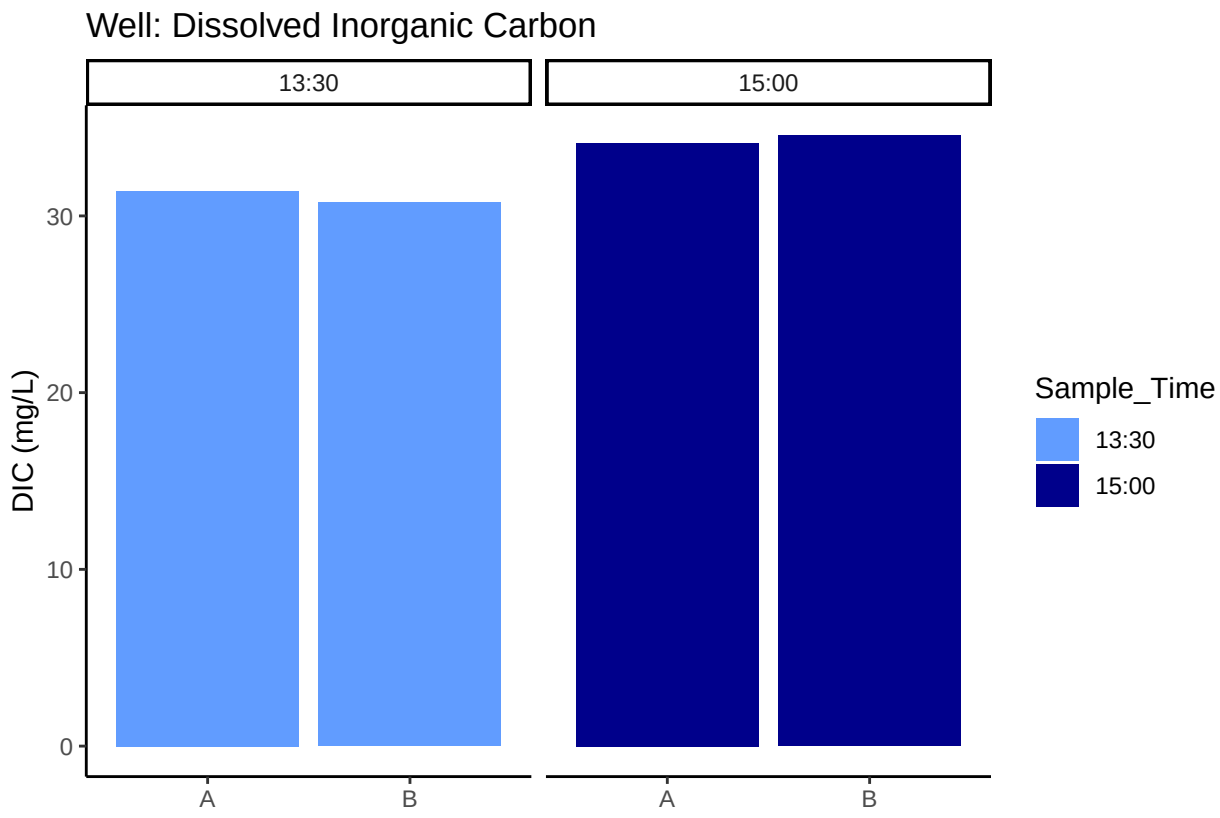
```
## Greenhouse Gas Data from Shimadzu GC - Shakey Samples
```



Analyte	Average	Std_Deviation
CH4 (ppm)	23.18	7.14

0.2 DIC Data

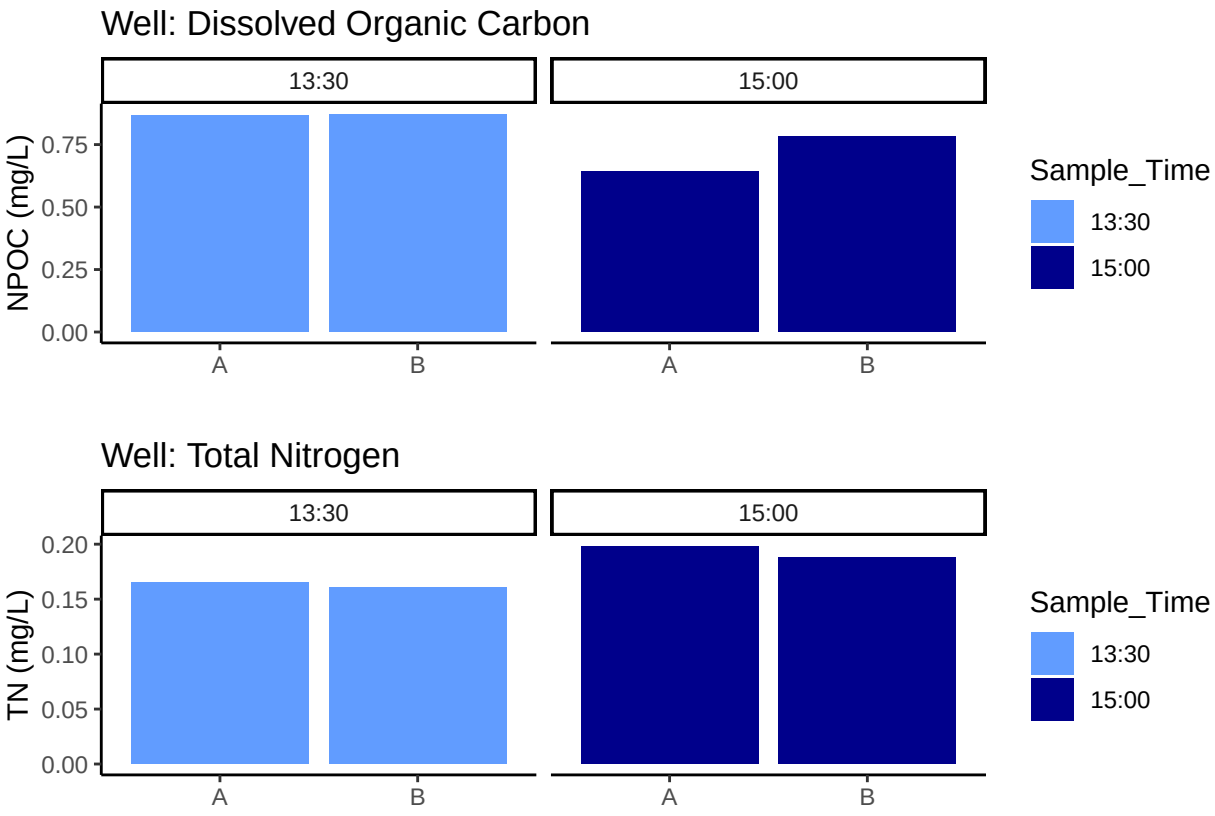
```
## DIC Data from Shimadzu TOC-V
```



Analyte	Average	Std_Deviation
DIC (mg/L)	32.71	1.89

0.3 TOC/TN Data

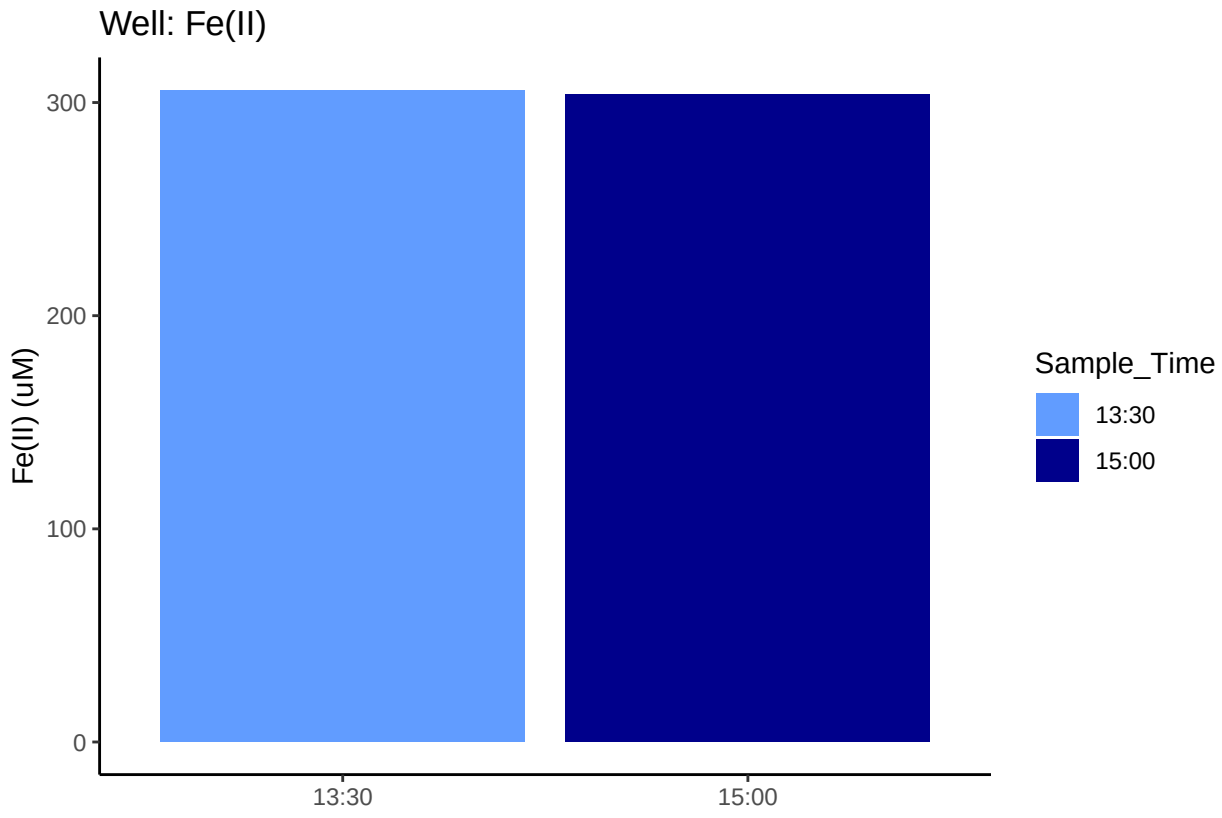
```
## DOC and TN Data from Shimadzu TOC/TN
```

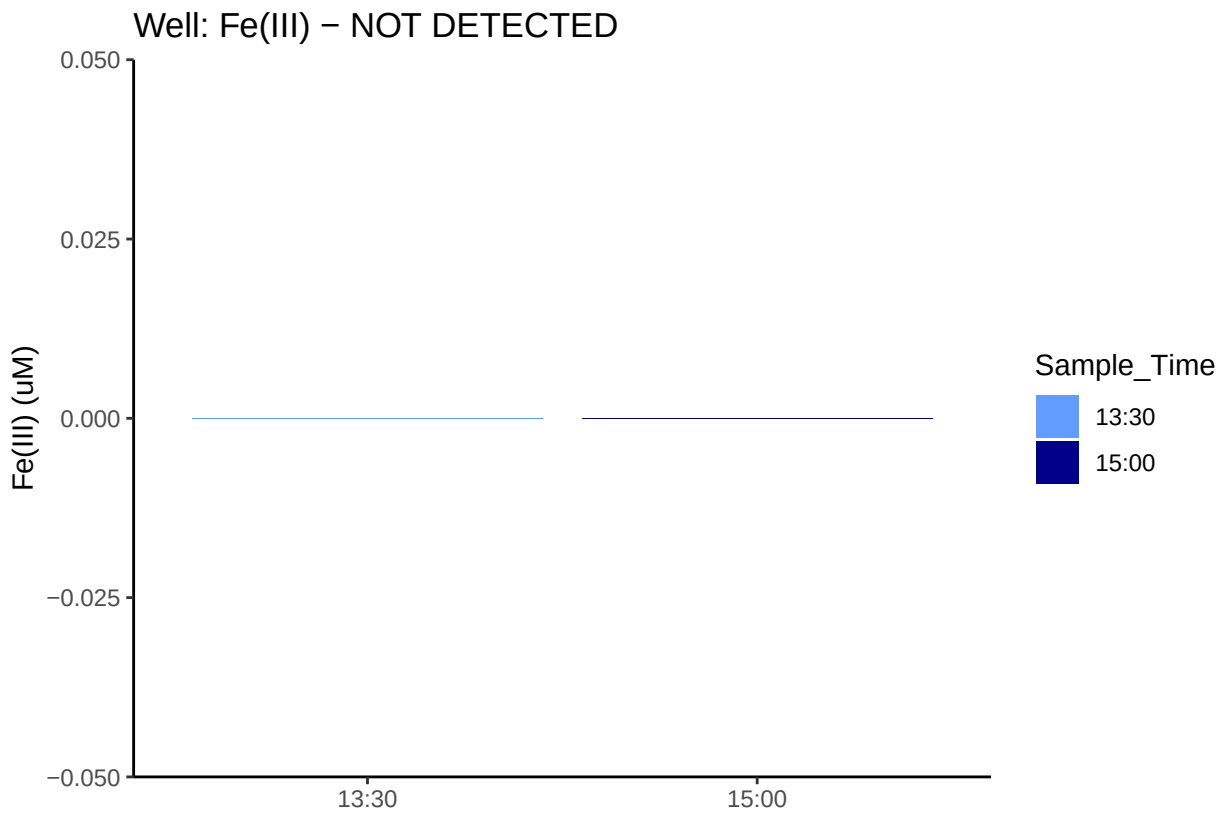


Analyte	Average	Std_Deviation
DOC (mg/L)	0.790	0.106
TN (mg/L)	0.178	0.018

0.4 FE Data

```
## FE Data from Shimadzu TOC-V
```

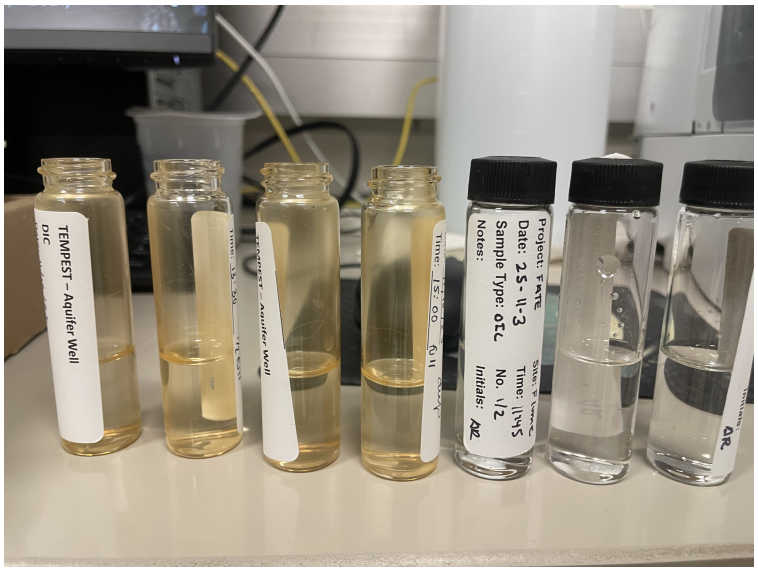




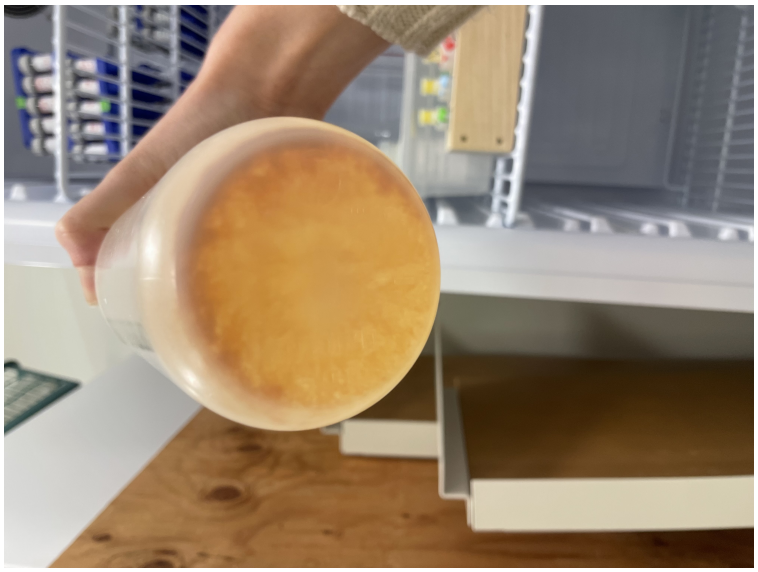
Analyte	Average	Std_Deviation
Fe(II) (uM)	304.9	1.36
Fe(III) (uM)	0.0	0.00

Pictures of FE precipitation

Four TMP Aquifer Well Vials compared to those with surface water from Rhode River:



Refridgerated samples from TMP Aquifer Well:



#STILL WORKING ON THE REST OF THE SAMPLES:

0.5 Sulfate / Chloride Data

0.6 TSS Data

“‘{#r, echo=FALSE}

#read out title cat(“TSS Data: ~1L Samples filtered with GFF”)

#Read in the data tss <- read.csv(“Raw Data/COMPASS_TEMPEST_WellTest_TSS_Data.csv”) #head(tss)

#Calculate an Avg. Sample Weight and caluclate TSS mg/L tss <- tss %>% mutate(Avg_Sample_Weight_g = rowMeans(select(., Tin_Filter_Sample_Weight_Dry_g, Tin_Filter_Sample_Weight_Dry1_g), na.rm = TRUE))

tss$TSS_mgL <-((tss$Avg_Sample_Weight_g - tss$Tin_Filter_Weight_g)*1000)/(tss$Filtered_Volume_mL/1000)

final_tss <- tss %>% #select(Project, Plot, grid, sample_name, Vial_ID, date,) %>% mutate(Project = “COMPASS”, # new column with same value on every row Experiment = “TEMPEST: Well Test”, Sample_Date = “2025-09-04”, Sample_Time = c(“12:25”, “13:00”, “14:00”, “NA”), Replicate = c(“A”, “A”,“A”, “NA”))

#this needs altered to match the tempest metadata and clean up final_tss <- final_tss %>% rename(sample_name = Sample_ID) %>% select(Project, Experiment, Sample_Date, Sample_Time, Replicate, sample_name, TSS_mgL, Filtered_Volume_mL # list columns in the order you want them)

#plot the TSS tss_plot <- ggplot(final_tss, aes(x=sample_name, y=TSS_mgL, fill=Sample_Time)) + geom_bar(stat = “identity”) + labs(title=“Well: Total Dissolved Solids”, y=“Total Dissolved Solids (mg/L)”, x=” “) + theme_classic()

print(tss_plot)

##remove the DI blank and make a table tss_table <- final_tss %>% filter(sample_name != “DI_Blank”) %>% select(“sample_name”, “TSS_mgL”) %>% mutate(TSS_mgL = round(TSS_mgL, 2))

kable(tss_table)

##remove the DI blank and make a table final_tss <- final_tss %>% filter(sample_name != “DI_Blank”)

#will put final data in processed data folder write.csv(final_tss, “Processed Data/TMP_20250904_FW_WellTest_TSS_Proc

“‘