

De Wijk Periodic Monitoring Report

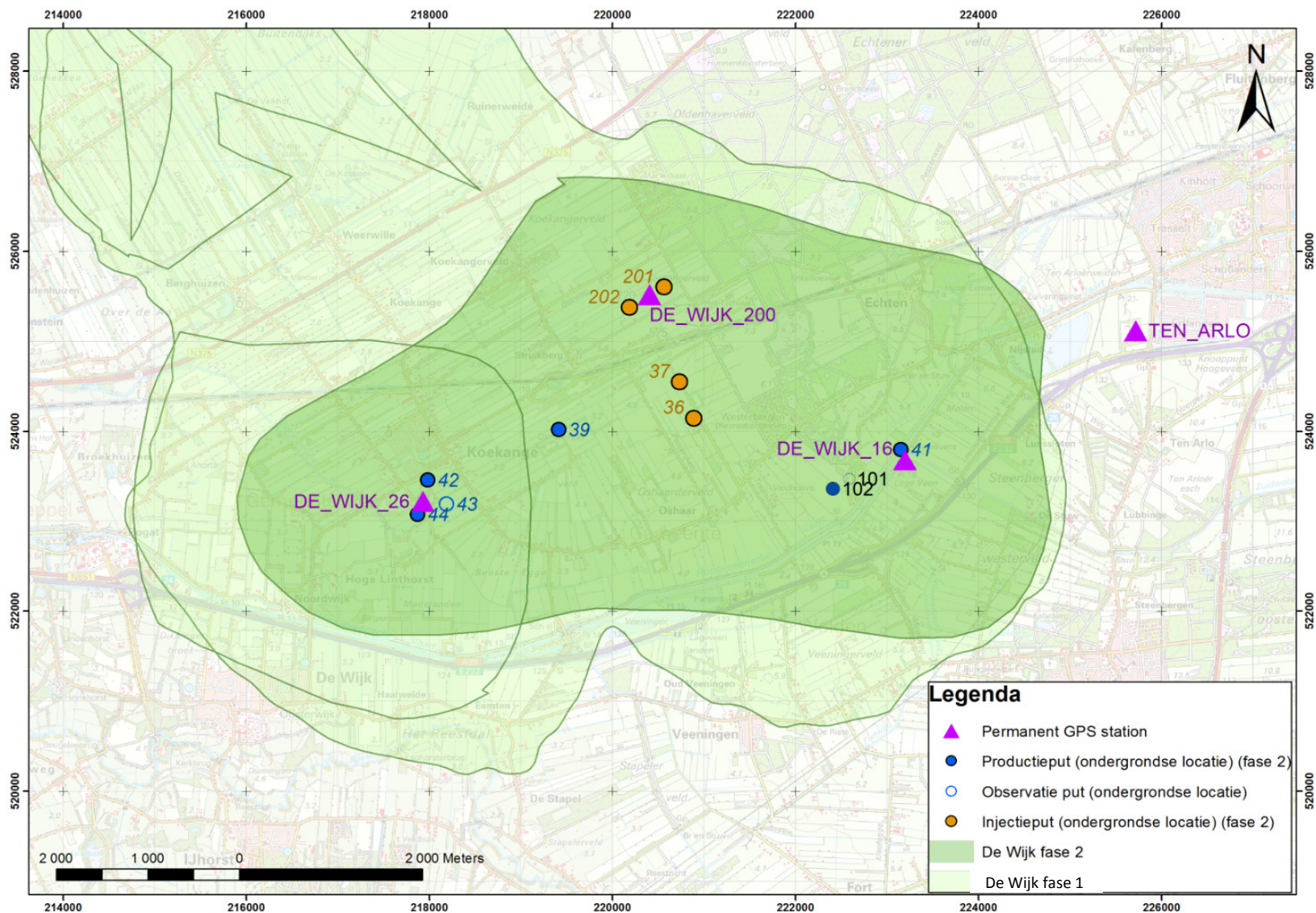
De Wijk Meet & Regel Protocol Month: March 2018

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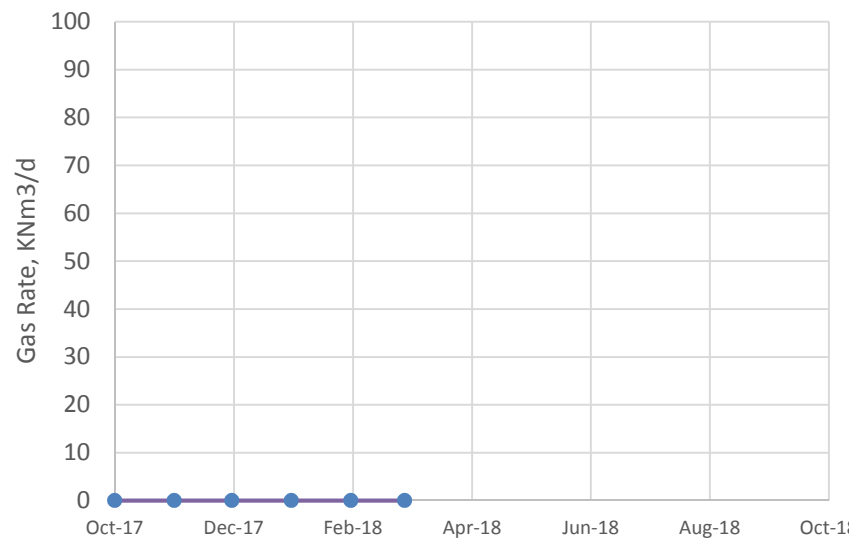
De Wijk: Production and Subsidence Monitoring

De Wijk Map

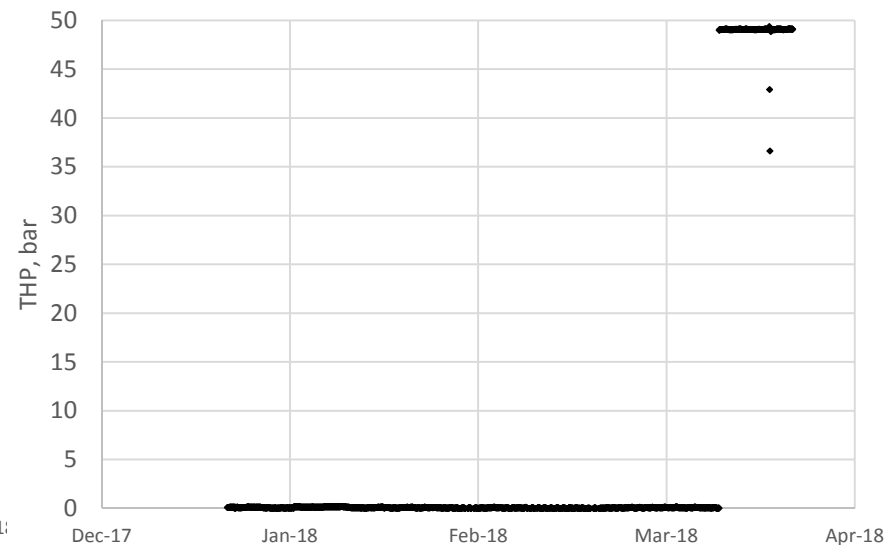


De Wijk Phase 2 Producers (East)

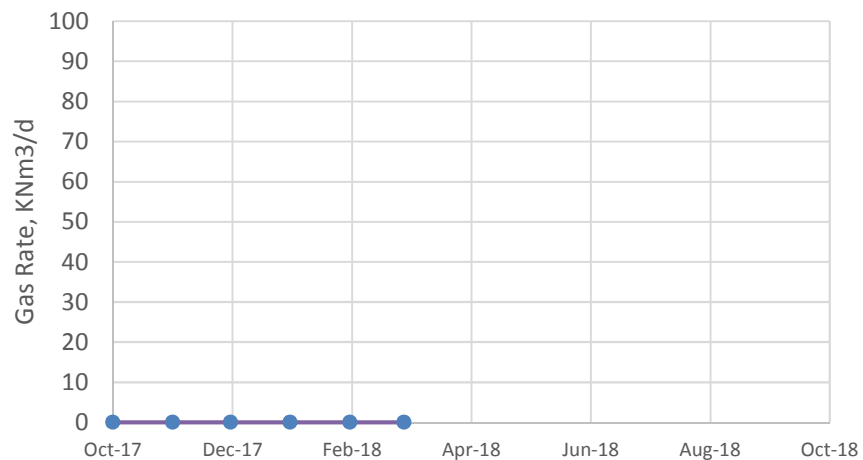
WYK-41, Production Rate



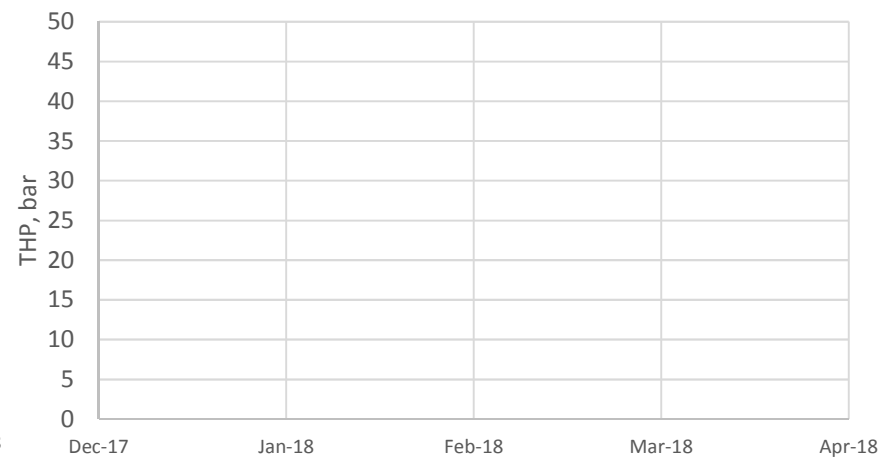
WYK-41 THP



WYK-102, Production Rate



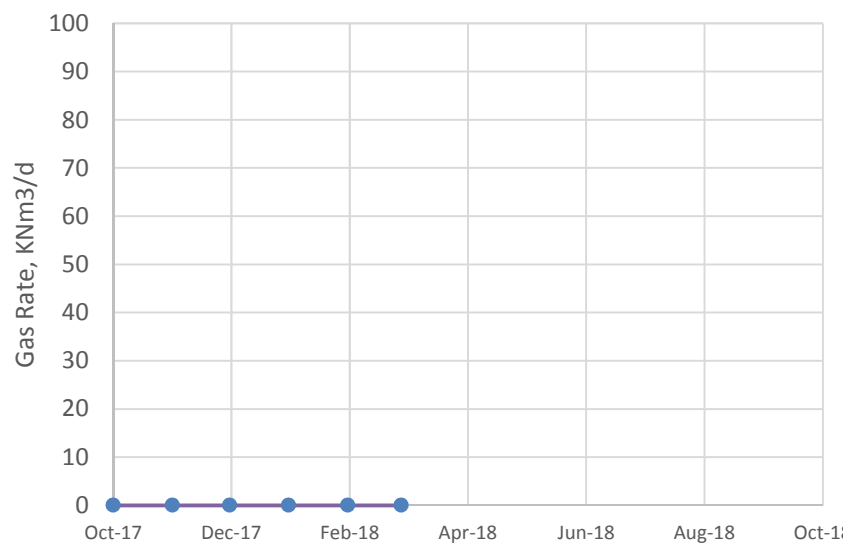
WYK-102 THP



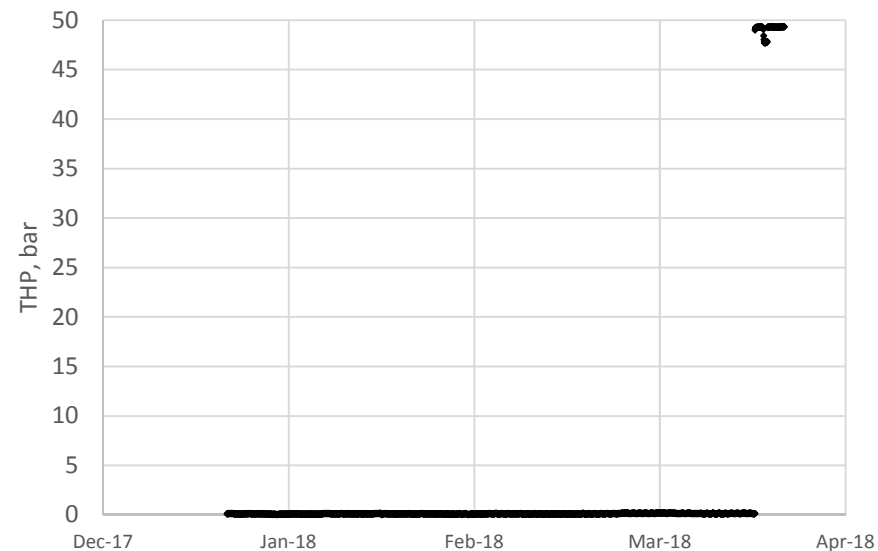
De Wijk: Production and Subsidence Monitoring

De Wijk Phase 2 Producers (West)

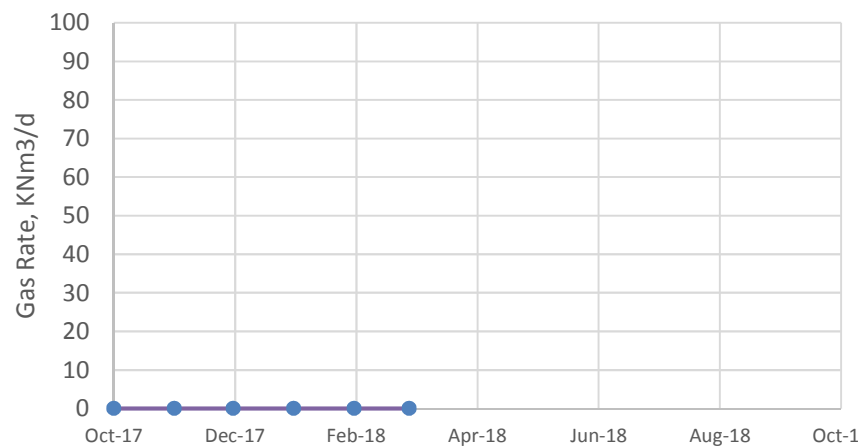
WYK-42, Production Rate



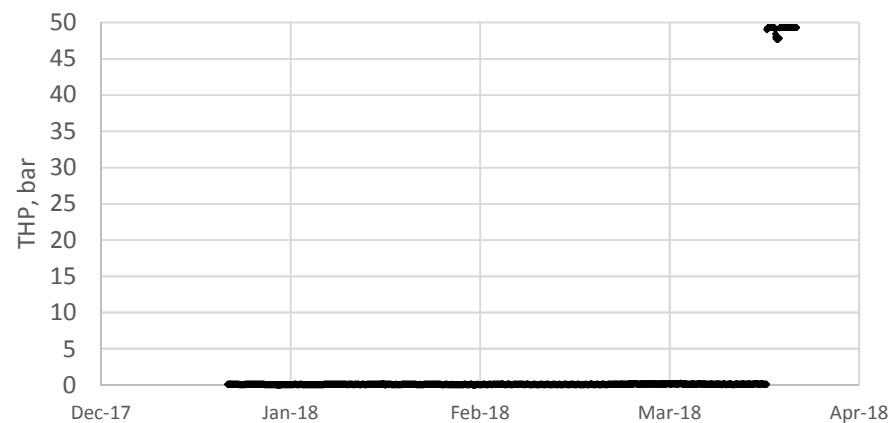
WYK-42 THP



WYK-44, Production Rate

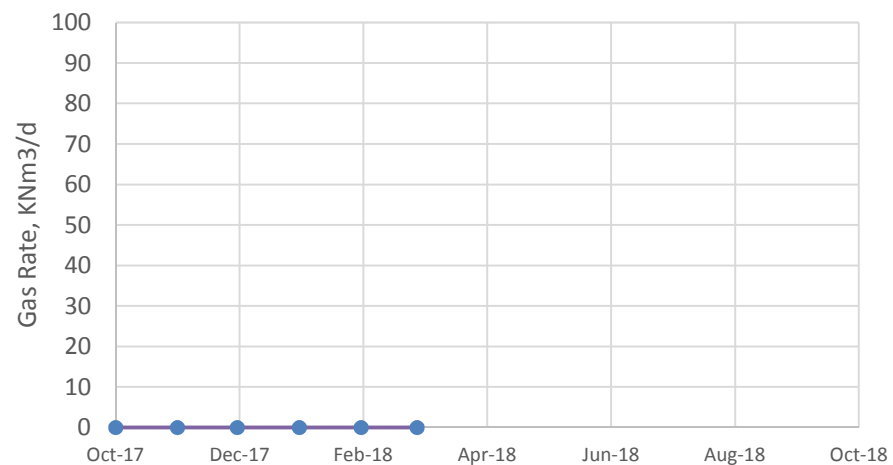


WYK-44 THP

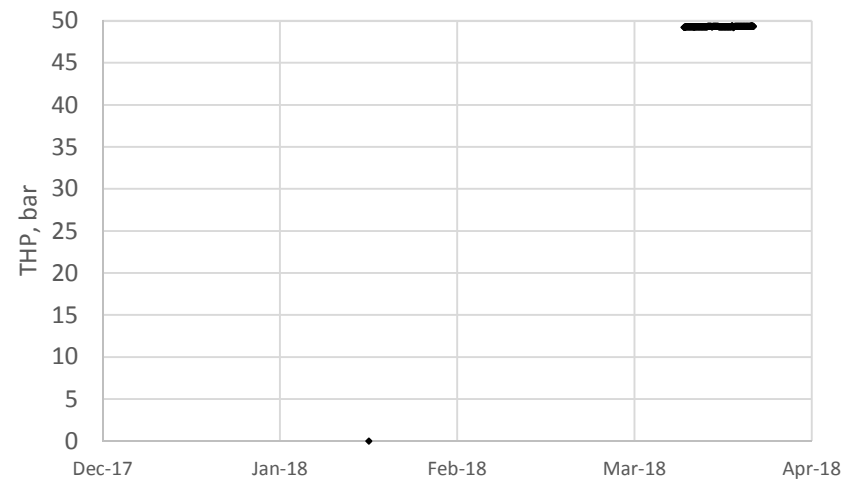


De Wijk Phase 2 Producers (West)

WYK-39, Production Rate

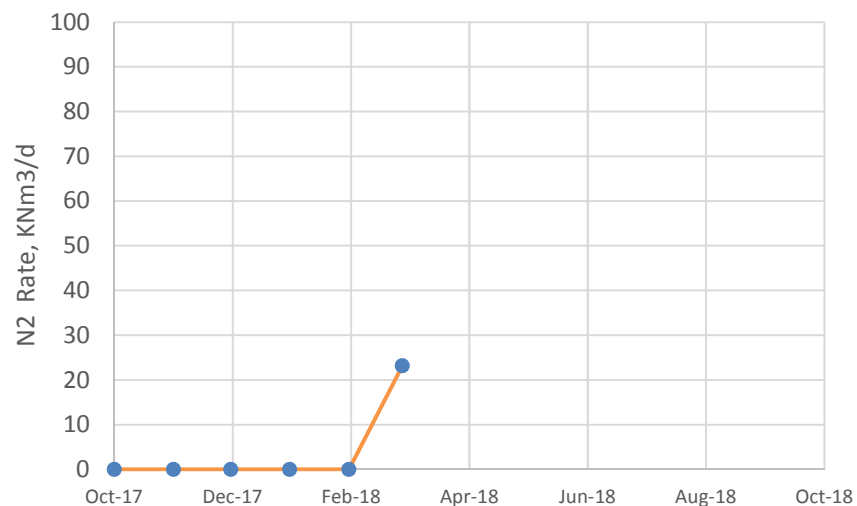


WYK-39 THP

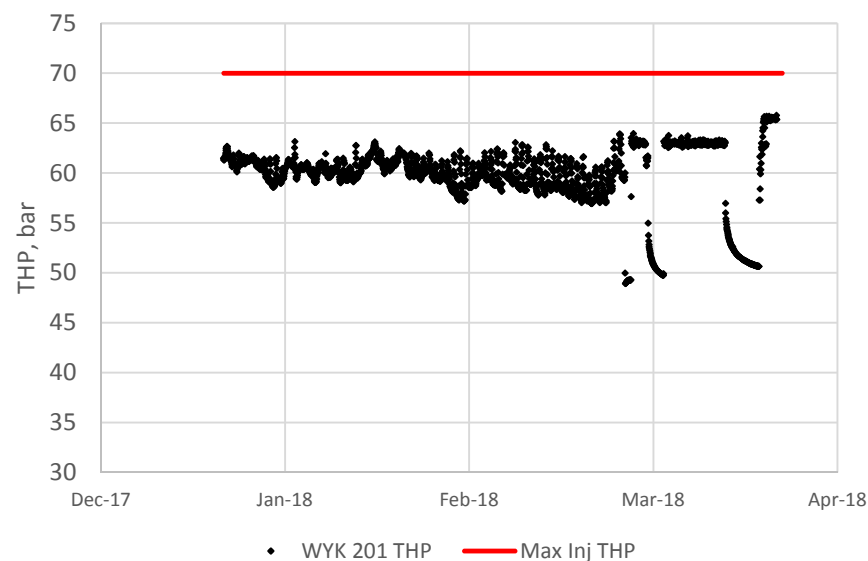


De Wijk Phase 2 Injectors

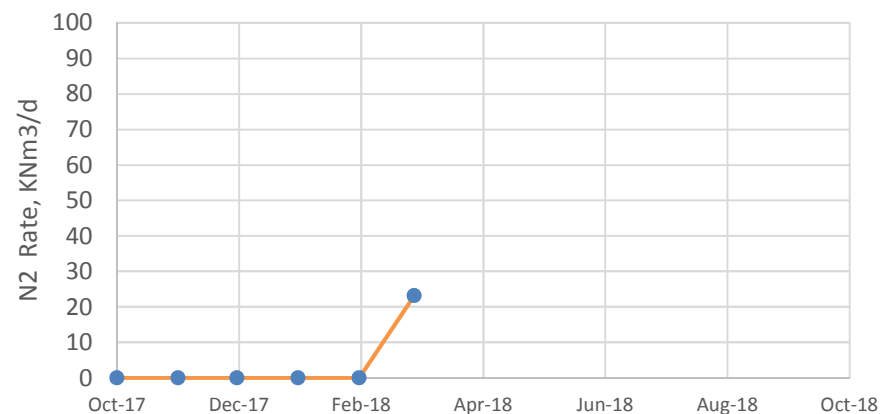
WYK-201



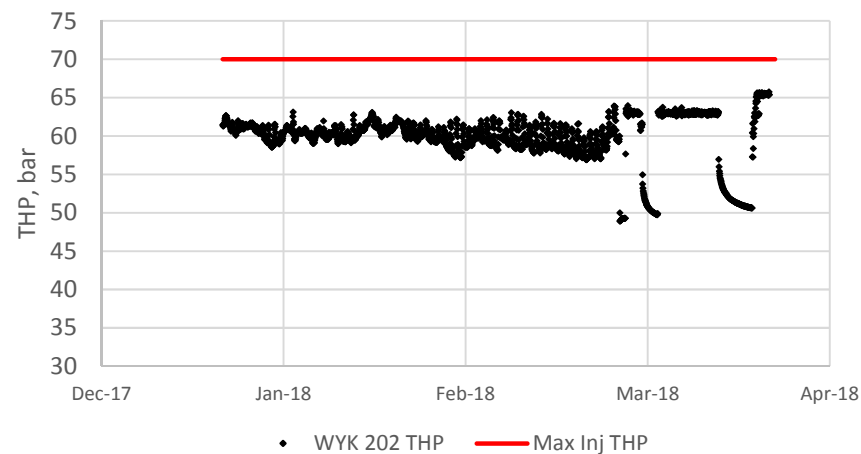
WYK-201 THP



WYK-202

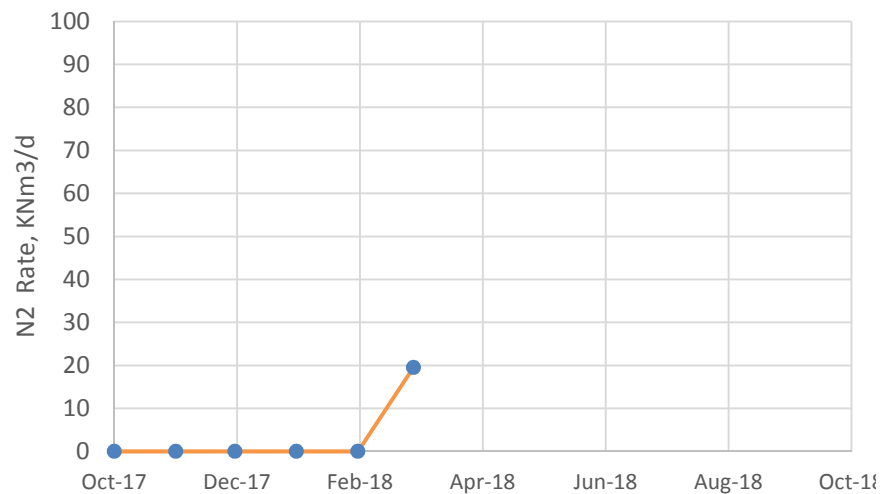


WYK-202 THP

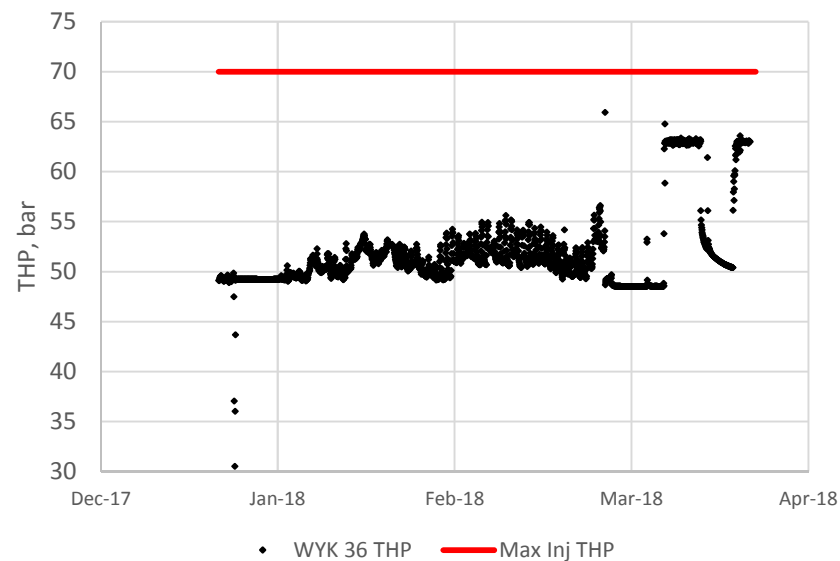


De Wijk Phase 2 Injectors

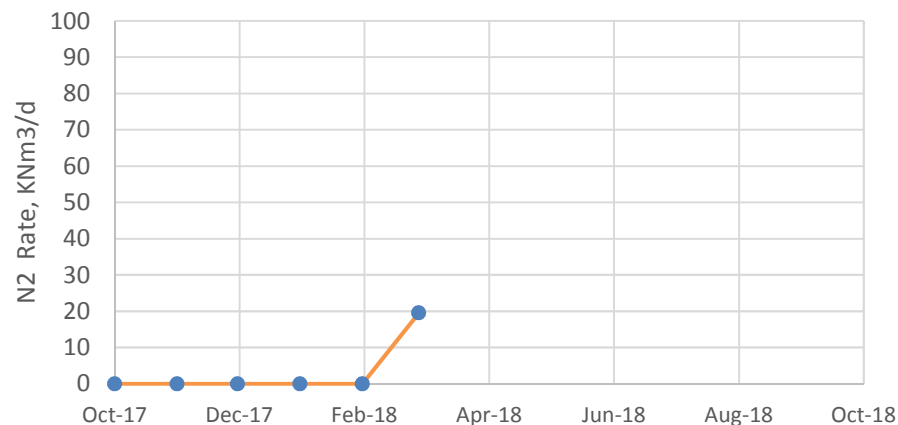
WYK-36



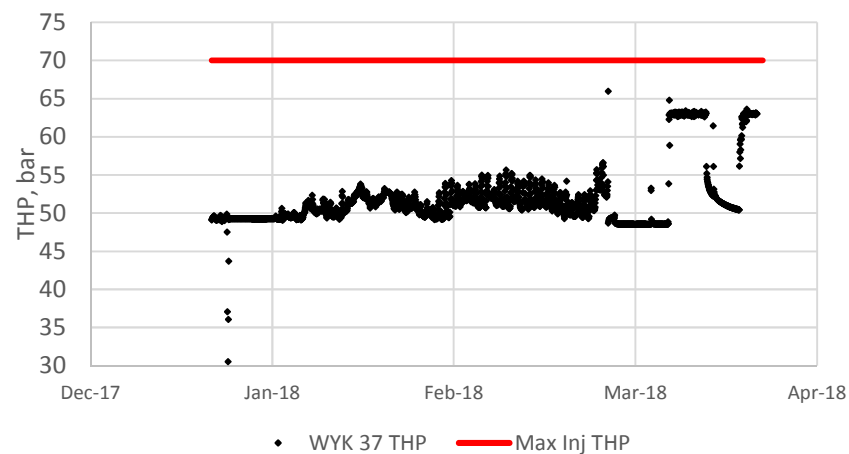
WYK-36 THP



WYK-37

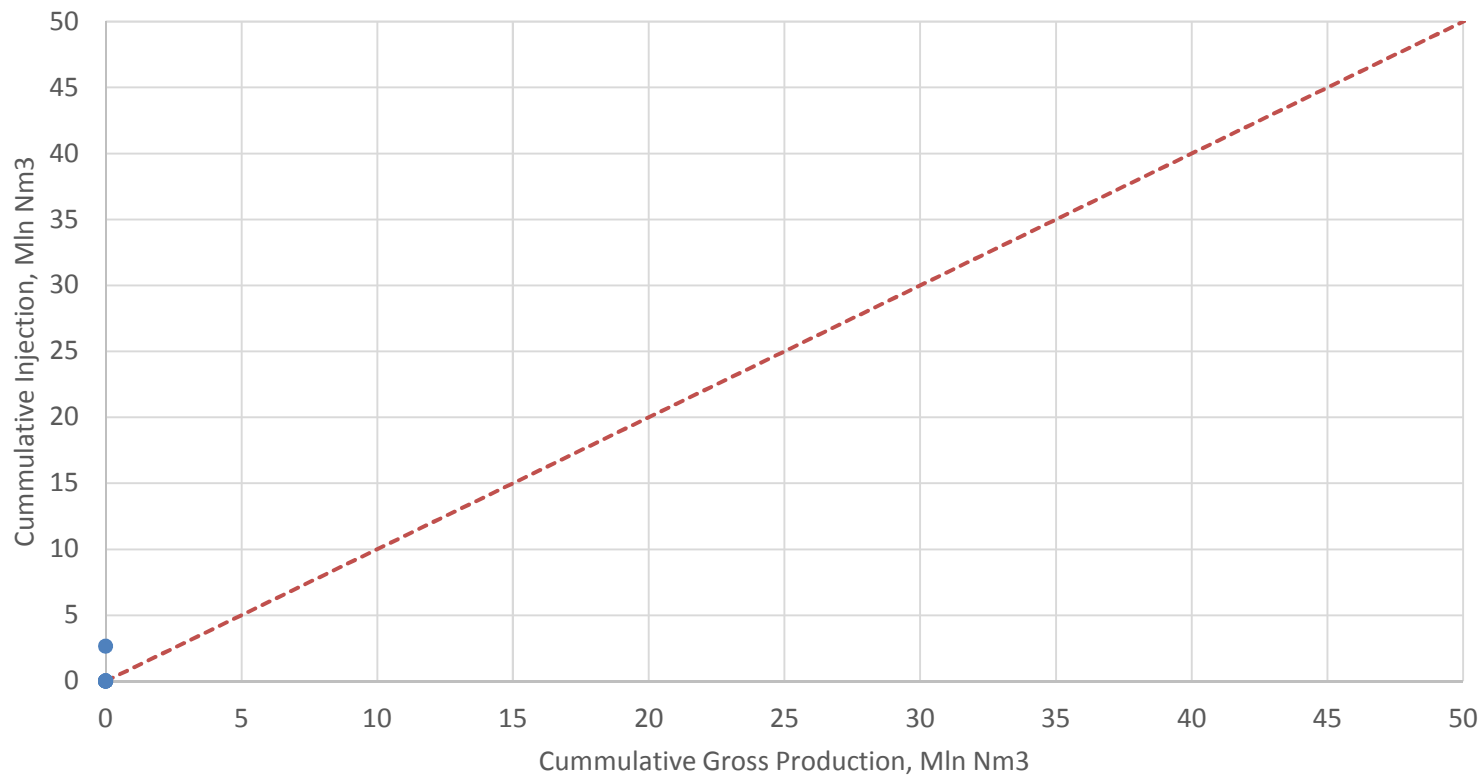


WYK-37 THP



De Wijk Phase 2

De Wijk Ph2 (Voidage Replacement Ratio Plot)

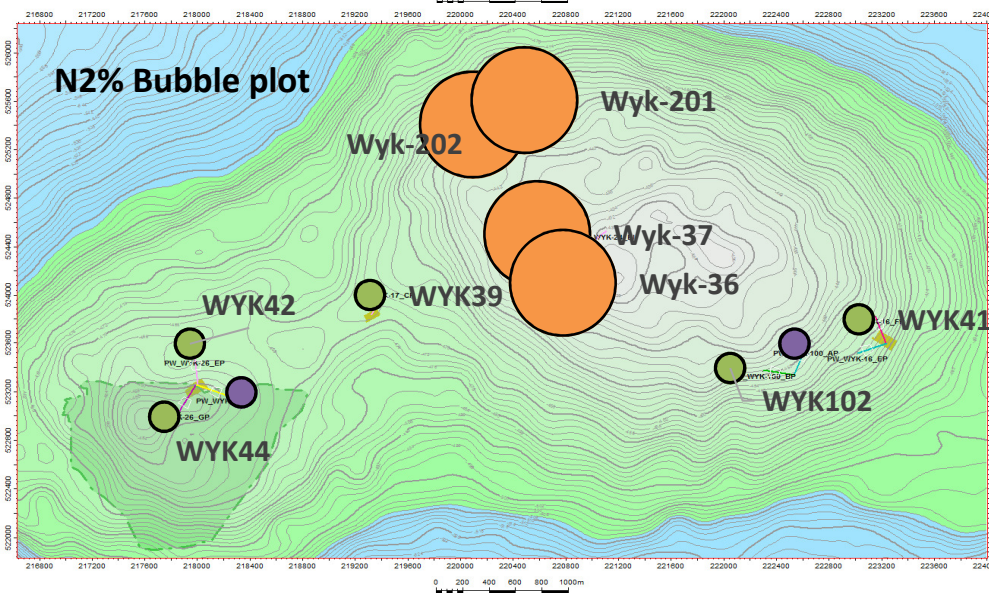
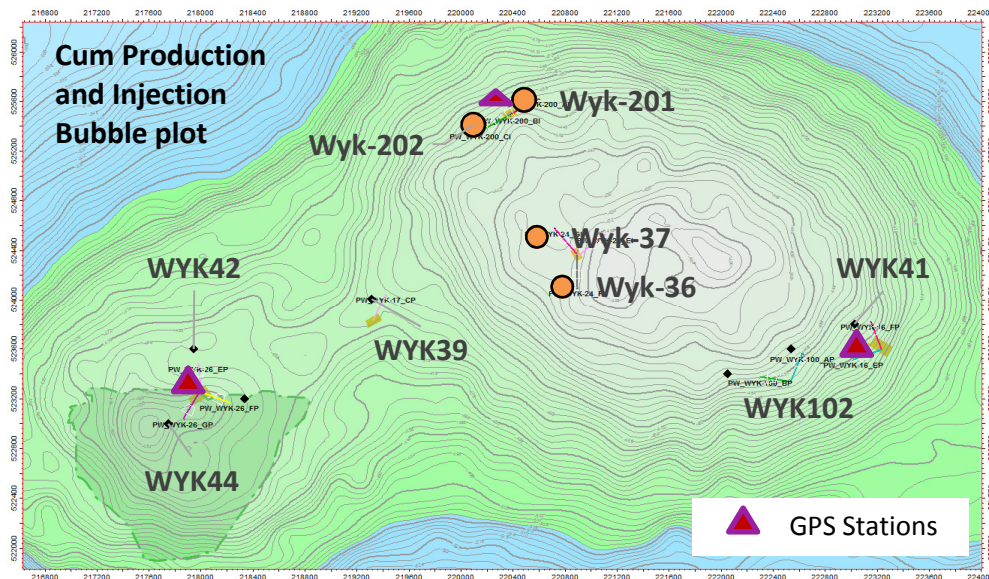


De Wijk Phase 2

Plot 1: Bubble plot for Cumulative production and Injection for the producers and Injectors.

The size of the bubble represents the cumulative volumes for that well. The larger the area of the circle, the more production/injection from that well.

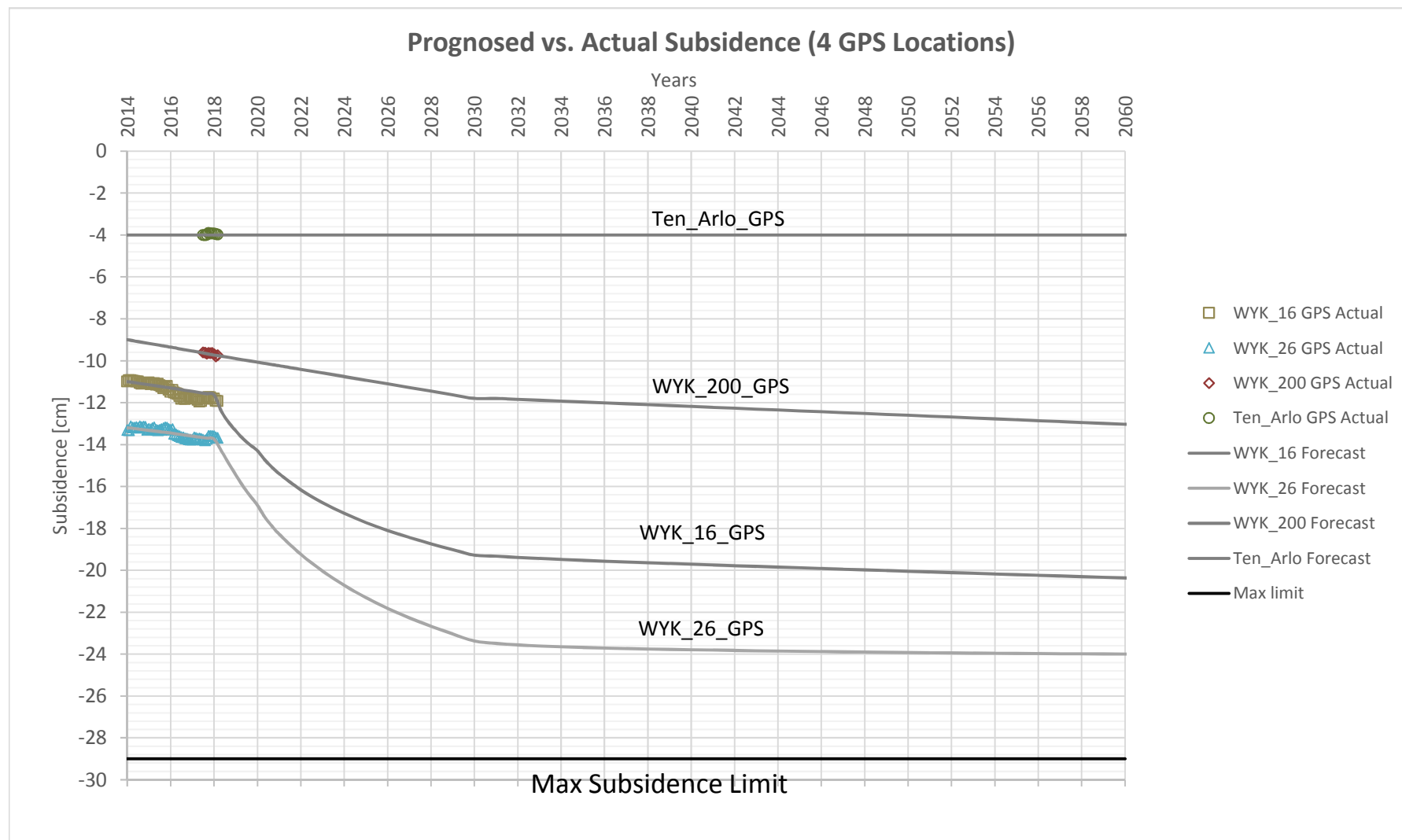
Plot 2: Bubble plot for N2% in producers and injectors. The size of the circle represents the N2 percentage for that well. The larger the area of the circle, the higher the N2 percentage of that producer. The injectors circle size corresponds to 100% N2.



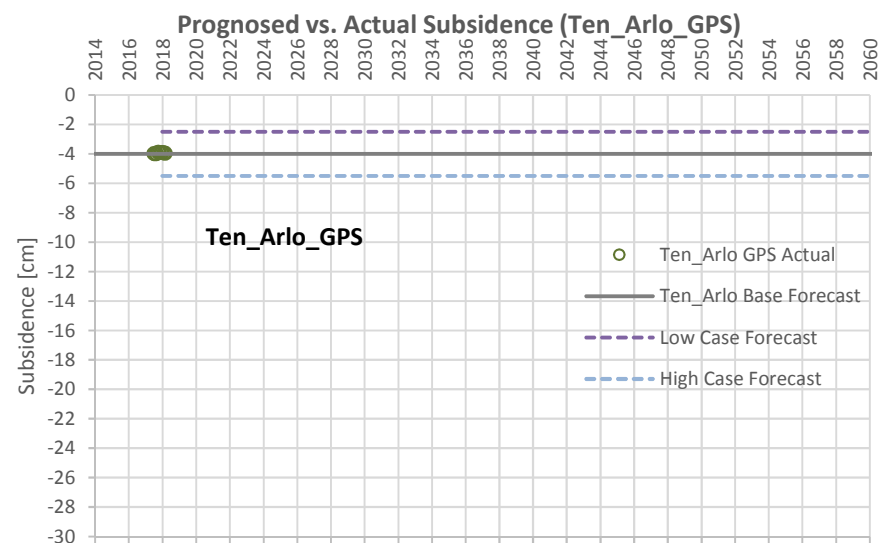
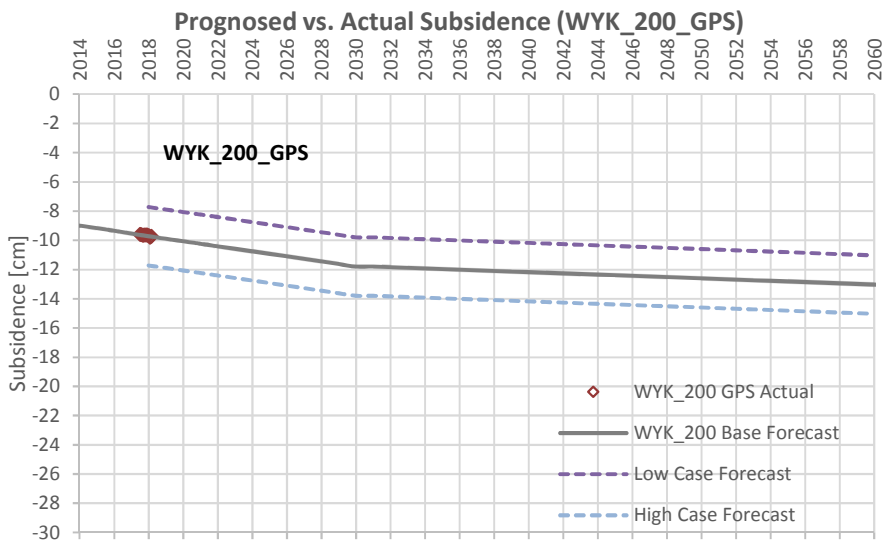
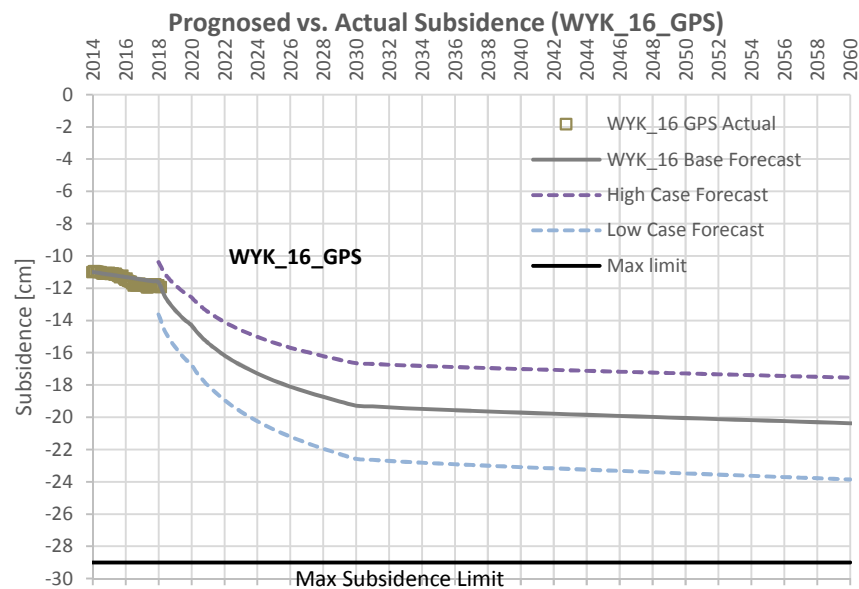
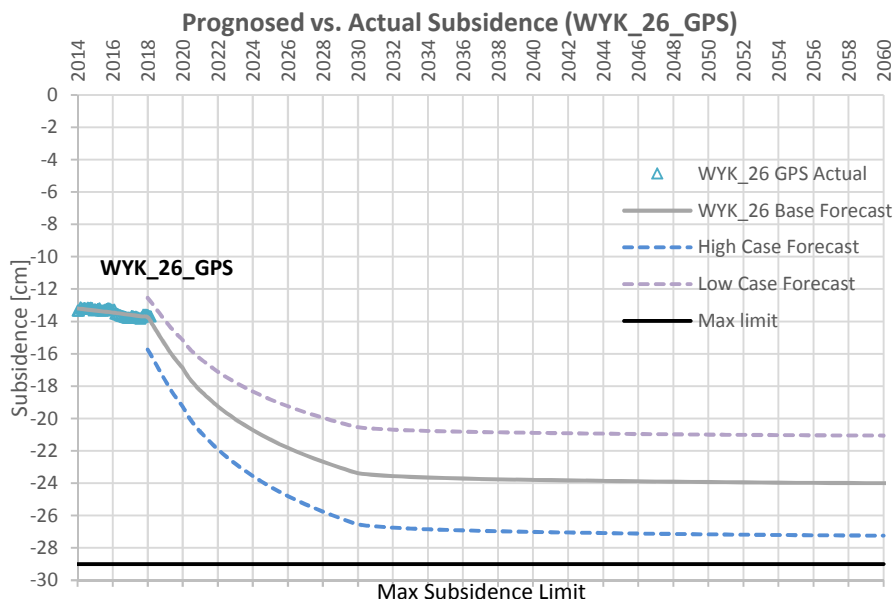
Well	Status	Cum Prd/Inj, Mln Nm3	N2%
WYK39	Producer	0.00	9.0
WYK41	Producer	0.00	9.0
WYK42	Producer	0.00	9.0
WYK44	Producer	0.00	9.0
WYK102	Producer	0.00	9.0
WYK101	Obs well	0.00	9.0
WYK-43	Obs well	0.00	9.0
Wyk-202	Injector	0.72	100.0
wyk-201	Injector	0.72	100.0
Wyk-36	Injector	0.61	100.0
Wyk-37	Injector	0.61	100.0

De Wijk: Production and Subsidence Monitoring

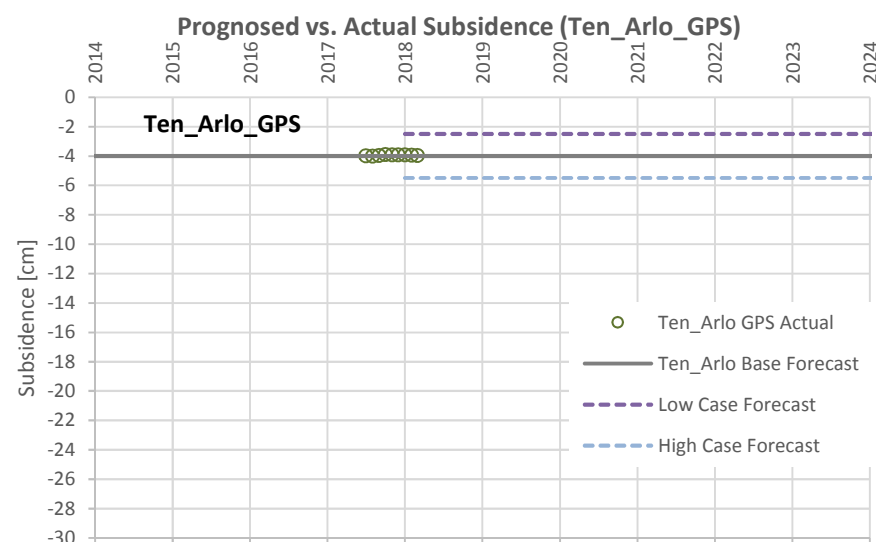
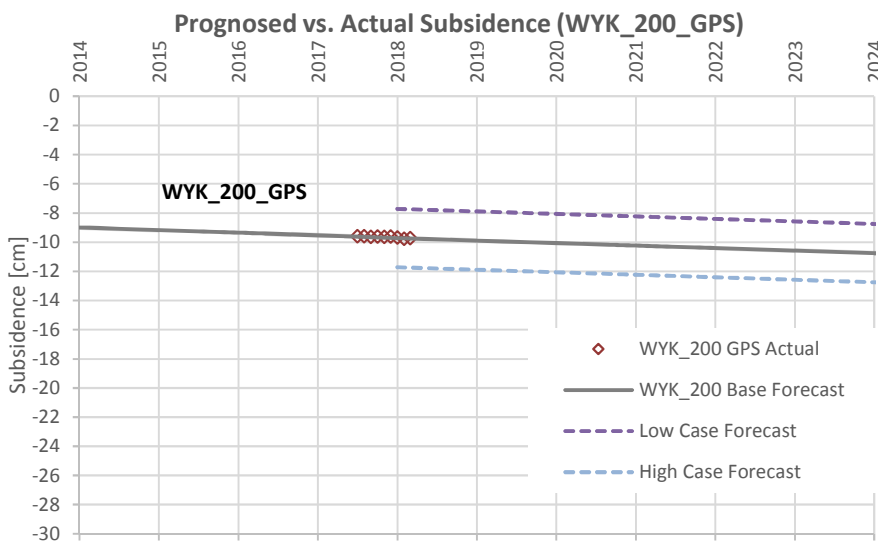
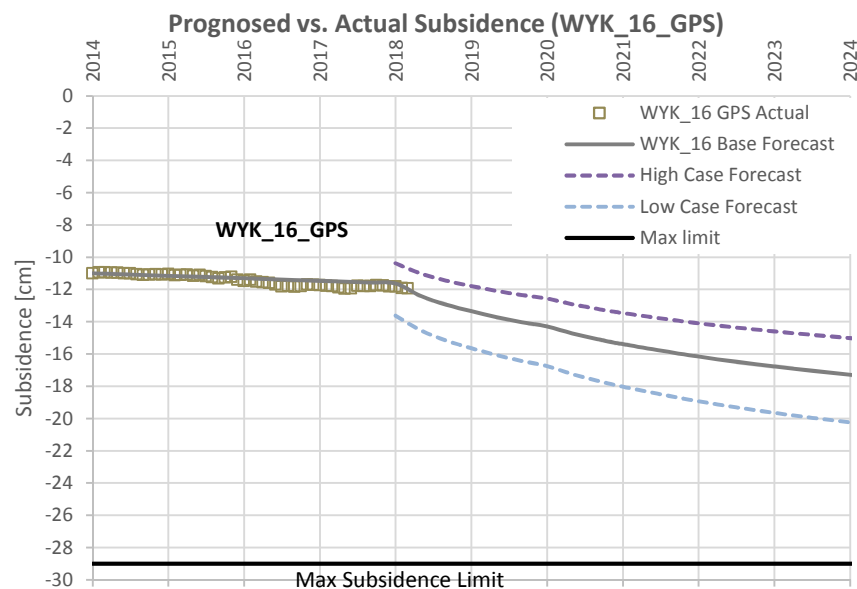
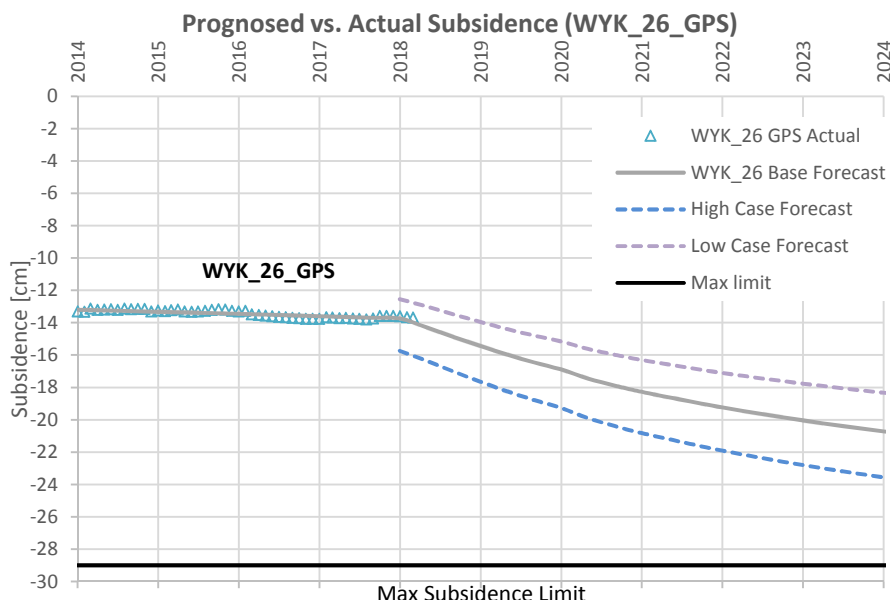
GPS stations: Total subsidence Prognosed vs. Actual



GPS stations: Total subsidence Prognosed Bandwidth vs. Actual

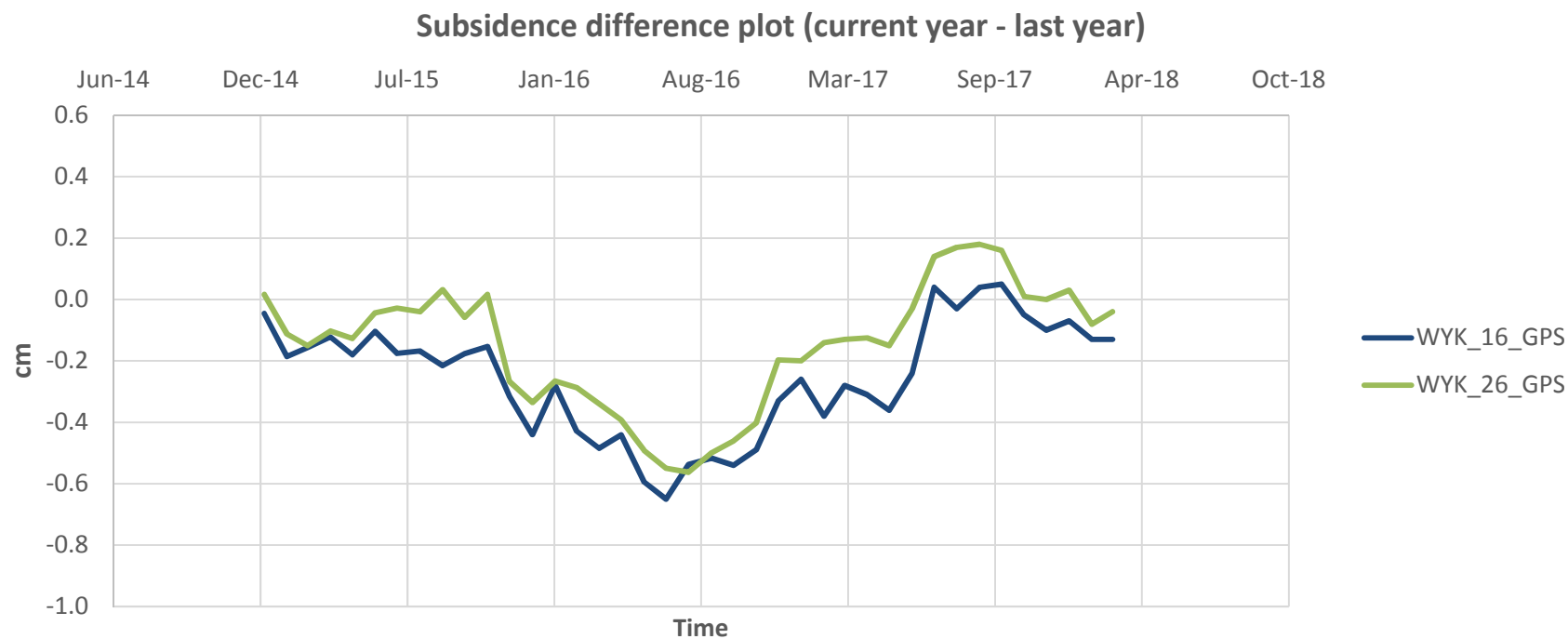


GPS stations: Total subsidence Prognosed Bandwidth vs. Actual



Subsidence difference plot for 4 GPS stations

↑ + Uplift
↓ - Subsidence



Subsidence Control Measures

Mar-18

GPS Station	Historical Subsidence (1974 - 2014), [cm]	Measured Subsidence (2014 - present)	Between 1974	Mar-18	Control Measures
			Actual Subsidence, [cm]	Prognosed Subsidence, [cm]	
GPS: De_Wijk_16	-11	-0.9	-11.9	-11.6	Continue Monitoring
GPS: De_Wijk_26	-13.2	-0.6	-13.8	-13.7	Continue Monitoring
GPS: De_Wijk_200	-9	-0.8	-9.7	-9.7	Continue Monitoring
GPS: Ten_Arlo	-4	0.0	-4.0	-4.0	Continue Monitoring

Injector	Max THP (3 months), bar
WYK-201	65.8
WYK-202	65.8
WYK-36	65.9
WYK-37	65.9

Remarks and Analysis of data in this report:

- 7th March 2018 : Injection started in WYK-201 & 202.
- 16th March 2018: Injection started in Wyk-36 and 37
- 3rd April 2018: Wyk-39 and 41 producers started production
- 4th April 2018: Wyk-44 producer started production

Pore Collapse Risk Analysis:

1. No sudden change in subsidence rate
2. No sudden change in wells production performance (rate or pressure)

Current assessment:

No Pore collapse in the field

