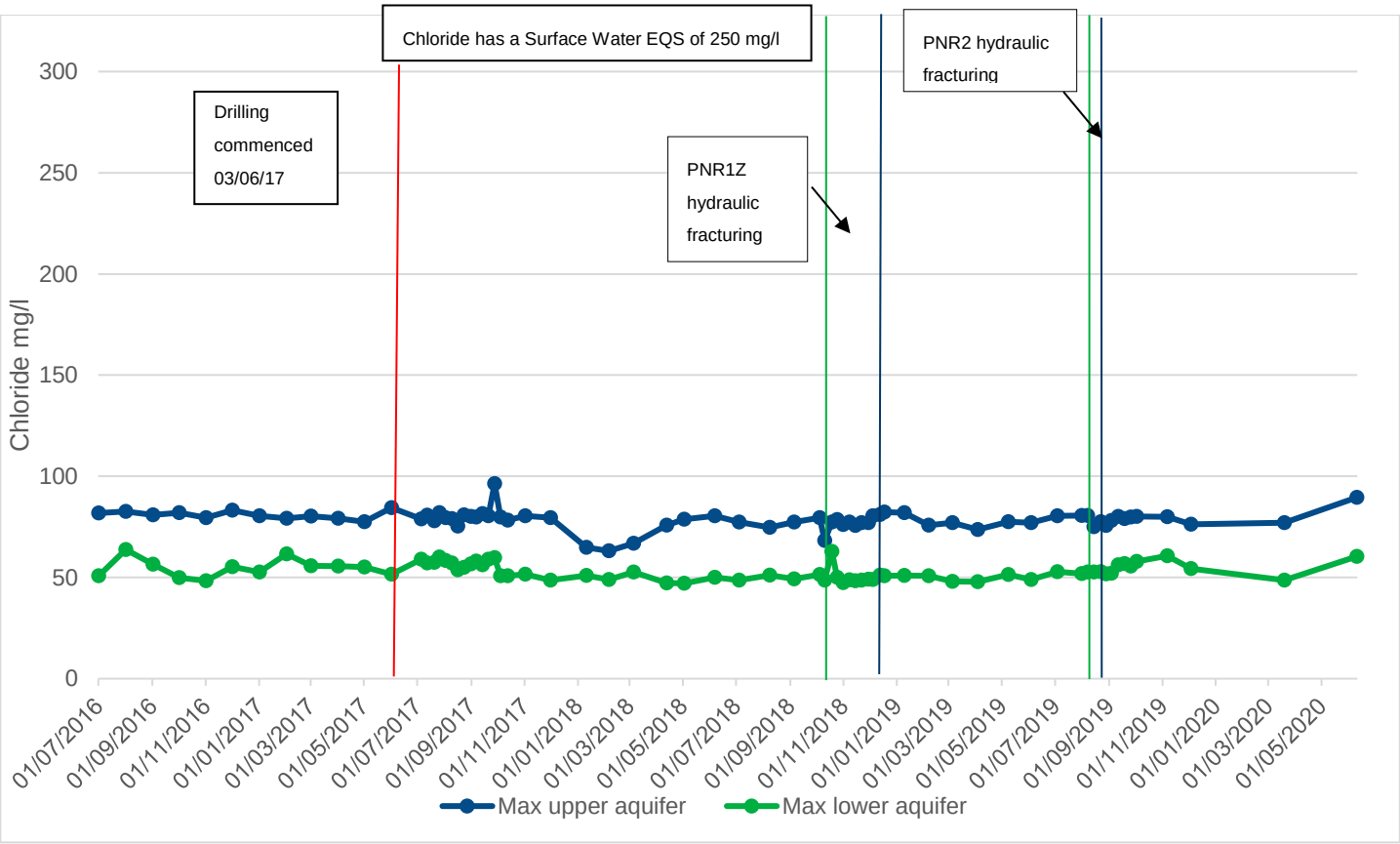
Preston New Road Groundwater Monitoring Data Q2 2020

The following report includes Cuadrilla's quarterly groundwater monitoring data for Quarter 2 2020 (April-June 2020). All data is presented in the tables below. As noted in the previous report, in January 2020, the monitoring frequency was changed and some substances are now not required to be analysed for due to a reduction of activity on site. Monitoring is now undertaken quarterly. Details of our approval of these changes are found in CAR form UP3431VF/0348127 on citizen space.

Chloride

Groundwater Monitoring Preston New Road Chloride in 2 Aquifers (Maximum Values) Quarter 2 2020

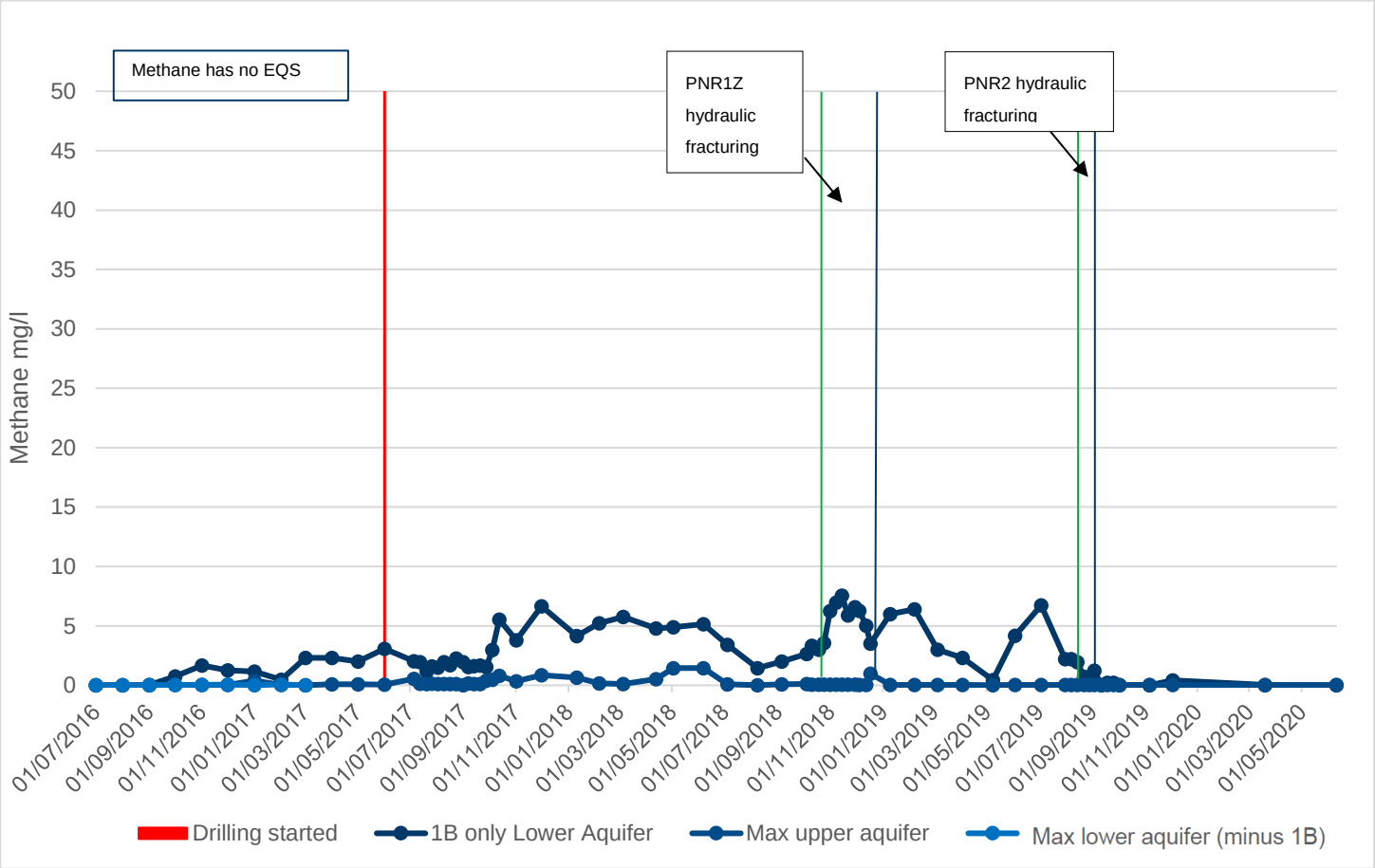


PNR1Z Hydraulic Fracturing commenced 15.10.2018 and stopped on 17.12.2018

PNR2 Hydraulic Fracturing commenced 13.08.2019 and stopped on 26.08.2019

Methane

Groundwater Monitoring Preston New Road Methane in 2 aquifers (Maximum Values) Quarter 2 2020



PNR1Z Hydraulic Fracturing commenced 15.10.2018 and stopped on 17.12.2018

PNR2 Hydraulic Fracturing commenced 13.08.2019 and stopped on 26.08.2019

Cuadrilla Preston New Road Groundwater Quality Monitoring Q2 2020 - Upper Aquifer

Permit Number								
Facility	Cuadrilla Preston New Road							
	Groundwater Monitoring Upper Aquifer Q2 June 2020							
							Pre Frack	
Substance/ Parameter	BH 1 (A)	BH 2 (A)	BH 3 (A)	BH 4 (A)	Q2	Q2	Aquifer A upper	
	10-Jun-20	10-Jun-20	10-Jun-20	10-Jul-20	min	max	Min	Max
Dissolved Barium #	218	107	139	141	107	218	37	421
Dissolved Cadmium #	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.5	0.5
Dissolved Strontium	240	295	235	225	225	295	202	649
Dissolved Zinc #	5.35	16.4	4.94	3.28	3.28	16.4	0	33
Dissolved Sodium #	33.2	28.1	34.9	37.6	28.1	37.6	24.1	42.3
Dissolved Potassium #	3.04	3.53	3.01	1.64	1.64	3.53	1.4	3.3
Dissolved Calcium #	124	124	123	115	115	124	101.9	138
Chloride #	62.4	53.8	55	89.6	53.8	89.6	24.6	96.3
Dissolved Methane	0.002	0.003	0.023	0.002	0.002	0.023	0.01	1.45

Interpretation of Data

There are no significant changes from pre fracking to the quality of groundwater monitored in the upper aquifer. The Potassium result for borehole 2 has been highlighted yellow as a slightly higher result though this is within acceptable Standard deviation (range).

*"Q2 2020 Summary" columns are the minimum and maximum readings for each determinand for comparison against the pre-hydraulic fracturing background minimum and maximum results.

Cuadrilla Preston New Road Groundwater Quality Monitoring Q2 2020 - Lower Aquifer

Permit Number								
Facility	Cuadrilla Preston New Road							
	Groundwater Monitoring Lower Aquifer Q2 June 2020							
							Pre Frack	
Substance/ Parameter	BH 1 (B)	BH 2 (B)	BH 3 (B)	BH 4 (B)	Q2	Q2	Background	
	10-Jun-20	10-Jun-20	10-Jun-20	10-Jun-20	min	max	Min	Max
Dissolved Barium #	46.4	69.8	57.4	62.2	46.4	69.8	49	397
Dissolved Cadmium #	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.5	0.6
Dissolved Strontium	554	601	485	544	485	601	207	683
Dissolved Zinc #	5.24	3.5	3.66	6.64	3.5	6.64	0	28
Dissolved Sodium #	32.3	30.9	27.9	27.7	27.7	32.3	24.9	53.1
Dissolved Potassium #	2.07	6.17	2.2	2.05	2.05	6.17	1.6	3.7
Dissolved Calcium #	123	126	117	125	117	126	98.2	136
Chloride #	60.4	49.5	48.6	44.5	44.5	60.4	10	63.8
Dissolved Methane	0.002	0.003	0.022	0.003	0.002	0.022	0.01	6.66

Interpretation of Data

There are no significant changes from pre fracking to the quality of groundwater monitored in the upper aquifer. The Potassium highlighted yellow is not within acceptable Standard deviation, and this is likely to be a one-off.

*"Q2 2020 Summary" columns are the minimum and maximum readings for each determinand for comparison against the pre-hydraulic fracturing background minimum and maximum results.