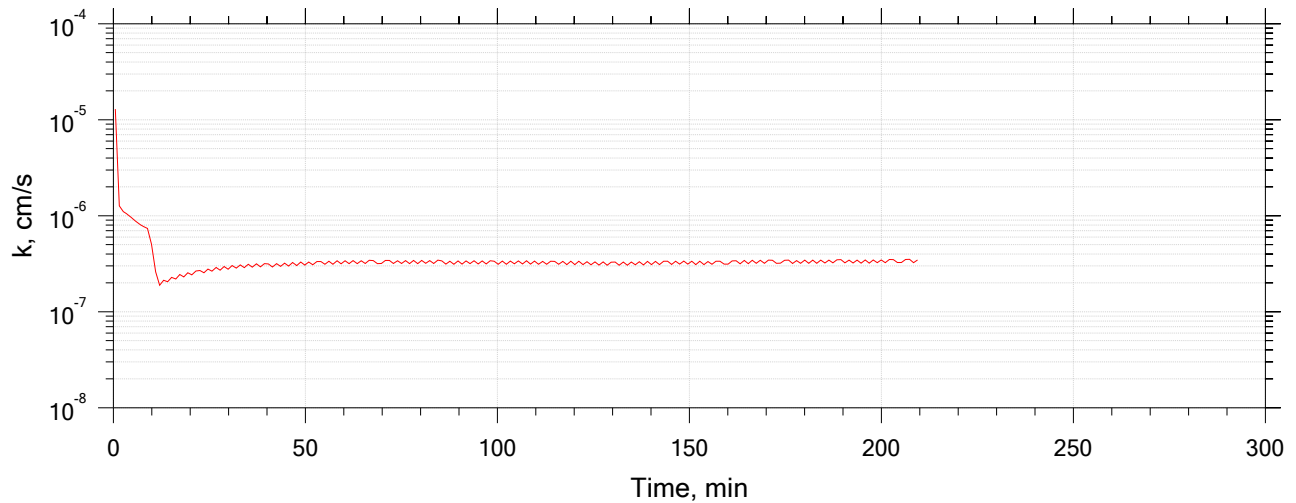
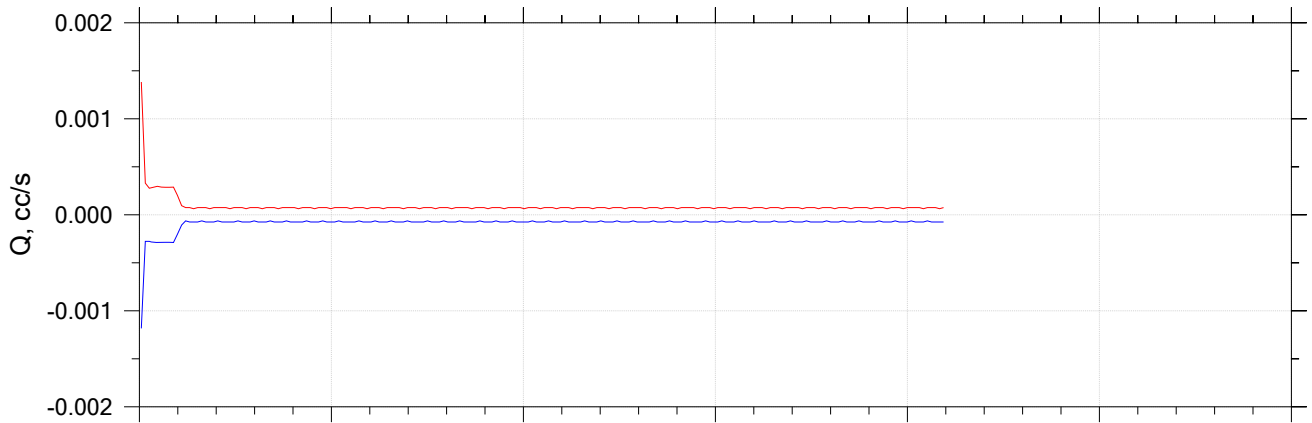
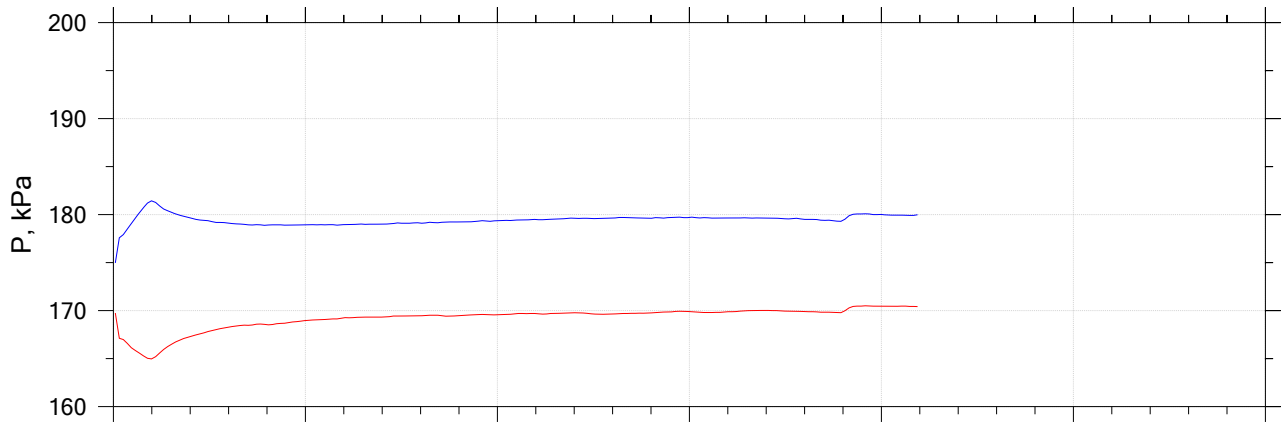



PERMEABILITY TEST

Permeability Phase

Step 1 of 1




	Project: PERM	Location: USA	Project No.: Flow -1
	Boring No.: 4A	Tested By: se	Checked By: bn
	Sample No.: 4A-1	Test Date: 02/22/2018	Depth: 2 ft.
	Test No.: 3	Sample Type: Undisturbed	Elevation: --
	Description: Constant flow rate permeability test		
	Remarks:		

PERMEABILITY TEST

Permeability Phase

Step 1 of 1

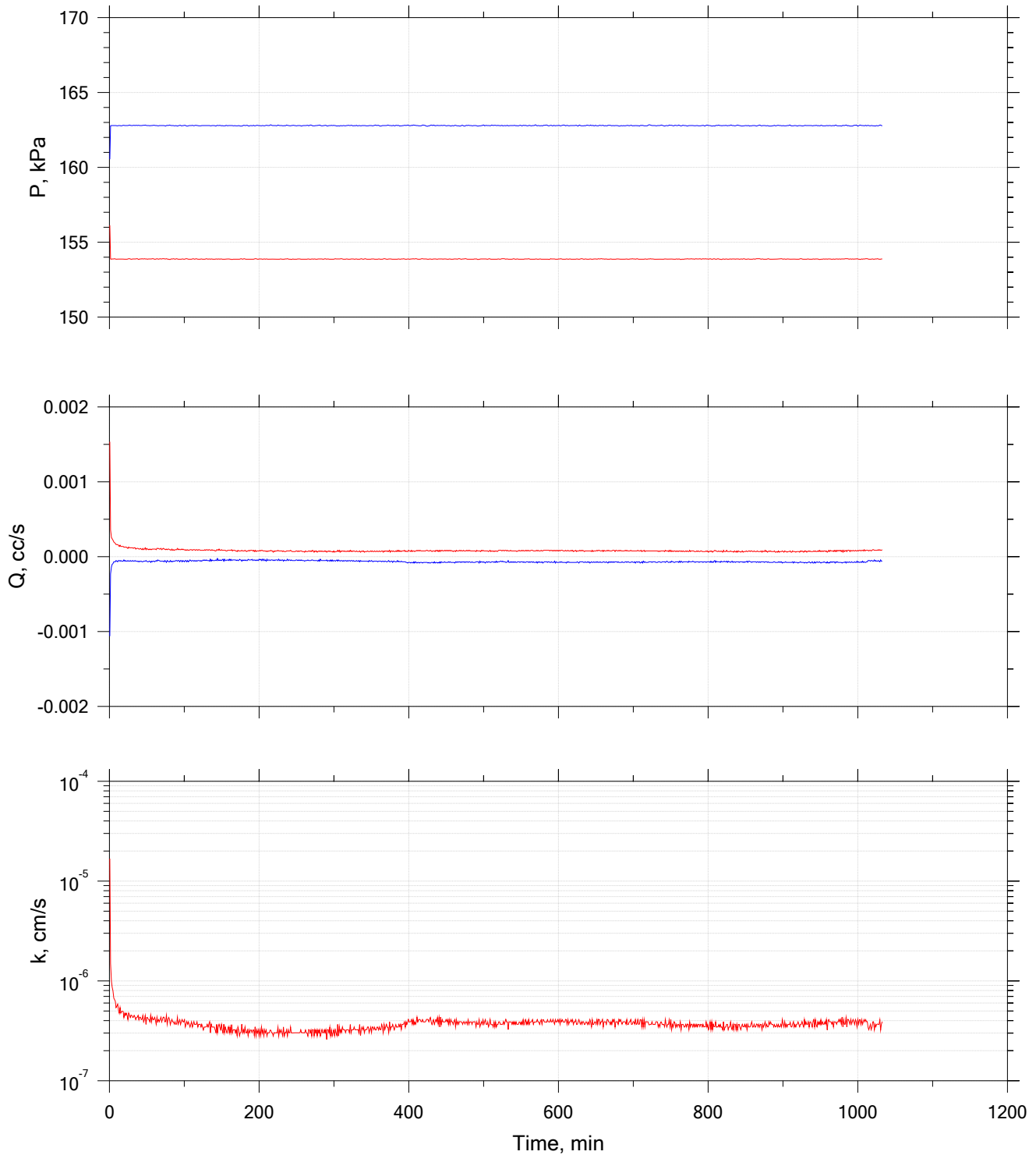
Time min	Bottom Pressure kPa	Top Pressure kPa	Bottom Flow cc/s	Top Flow cc/s	Gradient	Permeability cm/s
0.50069	174.98	169.75	-0.0011826	0.0013834	2.4985	1.2926e-05
1.5271	177.59	167.12	-0.00027623	0.00032935	6.0057	1.2691e-06
2.5766	177.93	166.99	-0.00027734	0.00027734	6.3188	1.1048e-06
3.6260	178.51	166.59	-0.00028686	0.00028686	6.9793	1.0346e-06
4.6775	179.08	166.13	-0.00028686	0.00029748	7.6625	9.5982e-07
5.7269	179.66	165.83	-0.00028800	0.00028800	8.2555	8.7818e-07
6.7764	180.23	165.58	-0.00028686	0.00028686	8.8035	8.2023e-07
7.8279	180.73	165.29	-0.00028686	0.00028686	9.3295	7.7399e-07
8.8773	181.21	165.04	-0.00028800	0.00028800	9.8218	7.3813e-07
9.9267	181.44	164.97	-0.00020186	0.00020186	10.023	5.0697e-07
10.978	181.28	165.21	-0.00010625	9.5621e-05	9.7539	2.6048e-07
12.028	180.91	165.59	-6.4000e-05	7.4666e-05	9.2496	1.8869e-07
13.077	180.59	165.95	-7.4370e-05	7.4370e-05	8.8013	2.1271e-07
14.127	180.41	166.25	-7.4667e-05	6.4001e-05	8.4760	2.0591e-07
15.176	180.24	166.50	-7.4370e-05	7.4370e-05	8.1956	2.2843e-07
16.227	180.08	166.74	-6.3747e-05	7.4372e-05	7.9264	2.1932e-07
17.277	179.94	166.94	-7.4666e-05	7.4666e-05	7.7021	2.4403e-07
18.326	179.83	167.09	-7.4372e-05	6.3747e-05	7.5228	2.3108e-07
19.378	179.73	167.24	-7.4370e-05	7.4370e-05	7.3545	2.5455e-07
20.427	179.63	167.38	-6.4000e-05	7.4666e-05	7.1976	2.4248e-07
21.477	179.51	167.48	-7.4372e-05	7.4372e-05	7.0519	2.6548e-07
22.528	179.44	167.56	-7.4370e-05	7.4370e-05	6.9510	2.6933e-07
23.578	179.41	167.68	-7.4667e-05	6.4001e-05	6.8499	2.5479e-07
24.627	179.38	167.81	-7.4370e-05	7.4370e-05	6.7376	2.7786e-07
25.676	179.28	167.91	-6.4001e-05	7.4667e-05	6.6031	2.6432e-07
26.726	179.19	168.02	-7.4370e-05	7.4370e-05	6.4798	2.8891e-07
27.777	179.19	168.12	-7.4370e-05	6.3746e-05	6.4123	2.7110e-07
28.827	179.18	168.20	-7.4667e-05	7.4667e-05	6.3448	2.9624e-07
29.876	179.13	168.27	-6.3746e-05	7.4370e-05	6.2663	2.7741e-07
30.928	179.08	168.34	-7.4370e-05	7.4370e-05	6.1879	3.0254e-07
31.977	179.04	168.40	-7.4667e-05	6.4001e-05	6.1205	2.8516e-07
33.027	179.03	168.45	-7.4370e-05	7.4370e-05	6.0756	3.0813e-07
34.078	178.99	168.49	-6.3746e-05	7.4370e-05	6.0308	2.8825e-07
35.128	178.94	168.47	-7.4667e-05	7.4667e-05	6.0086	3.1281e-07
36.177	178.93	168.50	-7.4370e-05	6.3746e-05	5.9749	2.9094e-07
37.226	178.96	168.59	-7.4667e-05	7.4667e-05	5.9409	3.1638e-07
38.276	178.94	168.60	-6.3746e-05	7.4370e-05	5.9185	2.9372e-07
39.327	178.89	168.57	-7.4370e-05	7.4370e-05	5.9076	3.1690e-07
40.377	178.93	168.52	-7.4667e-05	7.4667e-05	5.9637	3.1517e-07
41.426	178.94	168.55	-7.4370e-05	6.3746e-05	5.9523	2.9205e-07
42.478	178.94	168.64	-7.4372e-05	7.4372e-05	5.8960	3.1752e-07
43.527	178.94	168.67	-6.4000e-05	7.4666e-05	5.8735	2.9715e-07
44.577	178.91	168.69	-7.4372e-05	7.4372e-05	5.8399	3.2057e-07
45.628	178.91	168.76	-7.4370e-05	6.3746e-05	5.7949	2.9998e-07
46.677	178.94	168.82	-7.4667e-05	7.4667e-05	5.7722	3.2562e-07
47.727	178.93	168.86	-6.3746e-05	7.4370e-05	5.7385	3.0293e-07
48.776	178.91	168.91	-7.4666e-05	7.4666e-05	5.6936	3.3011e-07
49.826	178.94	168.97	-7.4372e-05	6.3747e-05	5.6709	3.0655e-07
50.877	178.98	169.01	-7.4370e-05	7.4370e-05	5.6707	3.3014e-07
51.927	178.96	169.03	-6.4001e-05	7.4667e-05	5.6483	3.0900e-07


	Project: PERM	Location: USA	Project No.: Flow -1
	Boring No.: 4A	Tested By: se	Checked By: bn
	Sample No.: 4A-1	Test Date: 02/22/2018	Depth: 2 ft.
	Test No.: 3	Sample Type: Undisturbed	Elevation: --
	Description: Constant flow rate permeability test		
	Remarks:		

PERMEABILITY TEST

Permeability Phase

Step 1 of 1




	Project: PERM	Location: USA	Project No.: Gradient -1
	Boring No.: 4A	Tested By: se	Checked By: bn
	Sample No.: 4A-2	Test Date: 02/28/2018	Depth: 3 ft.
	Test No.: 4	Sample Type: Undisturbed	Elevation: --
	Description: Constant gradient permeability test		
	Remarks:		

PERMEABILITY TEST

Permeability Phase

Step 1 of 1

Time min	Bottom Pressure kPa	Top Pressure kPa	Bottom Flow cc/s	Top Flow cc/s	Gradient	Permeability cm/s
0.50091	160.54	156.14	-0.0010617	0.0015346	1.9462	1.6790e-05
1.5276	162.78	153.88	-0.00022951	0.00035702	4.9492	1.4916e-06
2.5770	162.79	153.87	-0.00013655	0.00025603	4.9716	9.9385e-07
3.6264	162.79	153.88	-0.00010201	0.00023801	4.9604	8.6275e-07
4.6779	162.79	153.88	-9.3506e-05	0.00022101	4.9604	7.9805e-07
5.7274	162.79	153.88	-6.8274e-05	0.00019629	4.9604	6.7129e-07
6.7768	162.79	153.90	-6.8004e-05	0.00018701	4.9491	6.4854e-07
7.8283	162.79	153.88	-6.8003e-05	0.00017851	4.9604	6.2549e-07
8.8777	162.79	153.87	-5.1206e-05	0.00016215	4.9716	5.4015e-07
9.9271	162.78	153.87	-5.9503e-05	0.00016151	4.9605	5.6077e-07
10.977	162.78	153.87	-6.8274e-05	0.00016215	4.9605	5.8466e-07
12.026	162.79	153.87	-5.1003e-05	0.00015301	4.9716	5.1648e-07
13.078	162.79	153.88	-5.1003e-05	0.00013601	4.9604	4.7451e-07
14.127	162.79	153.88	-5.9741e-05	0.00015362	4.9604	5.4137e-07
15.176	162.78	153.88	-5.1003e-05	0.00013601	4.9492	4.7558e-07
16.228	162.78	153.88	-5.9503e-05	0.00013601	4.9492	4.9720e-07
17.277	162.79	153.87	-5.9741e-05	0.00013655	4.9716	4.9693e-07
18.327	162.81	153.87	-5.9503e-05	0.00013601	4.9828	4.9385e-07
19.378	162.81	153.87	-4.2502e-05	0.00012751	4.9828	4.2943e-07
20.428	162.79	153.87	-5.9741e-05	0.00012802	4.9716	4.7533e-07
21.477	162.79	153.87	-5.1003e-05	0.00012751	4.9716	4.5192e-07
22.527	162.79	153.87	-5.9741e-05	0.00012802	4.9716	4.7533e-07
23.576	162.79	153.87	-5.9503e-05	0.00011901	4.9716	4.5192e-07
24.627	162.79	153.88	-5.1003e-05	0.00011051	4.9604	4.0980e-07
25.677	162.81	153.90	-5.9741e-05	0.00012802	4.9603	4.7642e-07
26.726	162.83	153.90	-5.9503e-05	0.00011901	4.9714	4.5194e-07
27.778	162.81	153.88	-5.1003e-05	0.00011901	4.9715	4.3041e-07
28.827	162.79	153.87	-5.9740e-05	0.00011948	4.9716	4.5371e-07
29.877	162.79	153.87	-5.9503e-05	0.00011901	4.9716	4.5192e-07
30.928	162.79	153.88	-5.1003e-05	0.00011901	4.9604	4.3138e-07
31.978	162.81	153.88	-5.9740e-05	0.00011095	4.9715	4.3212e-07
33.027	162.81	153.88	-5.9504e-05	0.00011901	4.9715	4.5193e-07
34.076	162.79	153.88	-5.1205e-05	0.00011948	4.9604	4.3309e-07
35.126	162.81	153.88	-5.9504e-05	0.00010201	4.9715	4.0889e-07
36.177	162.81	153.90	-5.9503e-05	0.00011051	4.9603	4.3138e-07
37.227	162.79	153.90	-5.9741e-05	0.00011095	4.9491	4.3408e-07
38.276	162.81	153.87	-6.8003e-05	0.00011051	4.9828	4.5091e-07
39.328	162.81	153.85	-5.9503e-05	0.00010201	4.9940	4.0704e-07
40.377	162.79	153.88	-6.8275e-05	0.00010241	4.9604	4.3310e-07
41.427	162.79	153.88	-5.9503e-05	0.00011051	4.9604	4.3137e-07
42.478	162.79	153.88	-5.9503e-05	0.00010201	4.9604	4.0980e-07
43.528	162.79	153.90	-6.8275e-05	9.3878e-05	4.9491	4.1238e-07
44.577	162.81	153.88	-6.8003e-05	0.00011051	4.9715	4.5193e-07
45.626	162.81	153.88	-5.9741e-05	9.3878e-05	4.9715	3.8891e-07
46.676	162.81	153.90	-5.9503e-05	0.00010201	4.9603	4.0981e-07
47.727	162.83	153.88	-5.9503e-05	0.00011901	4.9827	4.5091e-07
48.777	162.81	153.88	-5.1206e-05	9.3878e-05	4.9715	3.6731e-07
49.826	162.79	153.88	-5.9503e-05	0.00011051	4.9604	4.3137e-07
50.878	162.79	153.87	-6.8003e-05	0.00010201	4.9716	4.3040e-07
51.927	162.79	153.88	-6.8275e-05	9.3878e-05	4.9604	4.1144e-07

	Project: PERM	Location: USA	Project No.: Gradient -1
	Boring No.: 4A	Tested By: se	Checked By: bn
	Sample No.: 4A-2	Test Date: 02/28/2018	Depth: 3 ft.
	Test No.: 4	Sample Type: Undisturbed	Elevation: --
	Description: Constant gradient permeability test		
	Remarks:		