



## WELL STIMULATION REPORT

Confluence

Willow 22-17-2L

05-123-50939-00

March 18, 2022

## Engineering Executive Summary

On Friday, December 03, 2021 the stimulation of treatment(s) was performed in the Niobrara formation on the Willow 22-17-2L well in WELD county, COLORADO.

### The proposed treatment(s) consisted of:

30,500	gallons of	15% HCl
0	gallons of	7.5% HCl
307,980	gallons of	FR Water
16,317,397	gallons of	FR Water EC-17
122,000	gallons of	Treated Water
2,562,000	pounds of	100 Mesh Premium White
12,768,150.84	pounds of	30/50 Premium White

### The actual treatment(s) consisted of:

99,824	gallons of	15% HCl
0	gallons of	7.5% HCl
1,355,481	gallons of	FR Water
16,545,125	gallons of	FR Water EC-17
557,116	gallons of	Treated Water
2,522,380	pounds of	100 Mesh Premium White
12,483,940	pounds of	30/50 Premium White

57 of 61 treatment(s) were fully completed. 0 treatment(s) were skipped, and 4 treatment(s) were screened out or otherwise cut short of design.

The well was first opened Thursday, December 02, 2021 at 23:03 with an opening pressure of 28.0 psi.

The total amount of proppant pumped was 15,006,320.0 lbm with an average concentration of 0.9 ppg and maximum concentration of 2.0 ppg. Treating pressure averaged 6877.92 psi and rate averaged 73.46 bpm.

The operation came offline at 02:41 and the well was shut in Thursday, December 23, 2021 at 02:49 with a final shut-in pressure of 4,340.1 psi. A more detailed description of the actual treatment can be found further down in this report.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well.

Regards,

CHRIS VARGAS

CHAD LEWIS

Crew Service Leader

Crew Lead Engineer

# Willow 22-17-2L Plug and Perf Depths

Stage	Plug Depth	Top Per ft -MD	Bottom Perf ft -MD	Total Perfs	Formation
1	19880	19689	19870	20	Niobrara B
2	19679	19488	19669	20	Niobrara B
3	19478	19287	19468	20	Niobrara B
4	19277	19087	19267	20	Niobrara B
5	19076	18886	19866	20	Niobrara B
6	18876	18685	18866	20	Niobrara B
7	18675	18484	18665	20	Niobrara B
8	18474	18283	18464	20	Niobrara B
9	18273	18083	18263	20	Niobrara B
10	18072	18002	18982	20	Niobrara B
11	17872	17681	17862	20	Niobrara B
12	17671	17480	17661	20	Niobrara B
13	17468	17282	17458	20	Niobrara B
14	17272	17084	17262	20	Niobrara B
15	17074	16886	17064	20	Niobrara B
16	16876	16688	16866	20	Niobrara B
17	16678	16490	16668	20	Niobrara B
18	16480	16292	16470	20	Niobrara B
19	16282	16094	16272	20	Niobrara B
20	16080	15896	16070	20	Niobrara B
21	15886	15698	15876	20	Niobrara B
22	15688	15500	15678	20	Niobrara B
23	15490	15302	15480	20	Niobrara B
24	15292	15104	15282	20	Niobrara B
25	15094	14906	15084	20	Niobrara B
26	14896	14705	14886	20	Niobrara B
27	14690	14504	14680	20	Niobrara B
28	14494	14303	14484	20	Niobrara B
29	14290	14102	14280	20	Niobrara B
30	14092	13899	14082	20	Niobrara B
31	13889	13696	13879	20	Niobrara B
32	13686	13493	13676	20	Niobrara B
33	13483	13290	13473	20	Niobrara B
34	13280	13087	13270	20	Niobrara B
35	13077	12884	13067	20	Niobrara B
36	12874	12681	12864	20	Niobrara B
37	12671	12478	12661	20	Niobrara B
38	12469	12275	12458	20	Niobrara B
39	12265	12072	12255	20	Niobrara B
40	12062	11869	12052	20	Niobrara B
41	11859	11666	11846	20	Niobrara B
42	11656	11463	11646	20	Niobrara B
43	11456	11260	11443	20	Niobrara B
44	11250	11060	11240	20	Niobrara B
45	11049	10857	11039	20	Niobrara B
46	10846	10654	10836	20	Niobrara B
47	10643	10453	10633	20	Niobrara B
48	10442	10252	10432	20	Niobrara B
49	10241	10051	10231	20	Niobrara B
50	10036	9850	10022	20	Niobrara B
51	9840	9649	9830	20	Niobrara B
52	9639	9448	9629	20	Niobrara B
53	9438	9247	9428	20	Niobrara B
54	9237	9047	9227	20	Niobrara B
55	9036	8846	9026	20	Niobrara B
56	8836	8645	8826	20	Niobrara B
57	8635	8448	8625	20	Niobrara B
58	8434	8243	8424	20	Niobrara B
59	8233	8043	8223	20	Niobrara B
60	8032	7842	8022	20	Niobrara B
61	7832	7635	7821	20	Niobrara B