

Operator	Cub Creek Energy, LLC
Well	Litzenberger #21
API	05-123-42769
Formation	Niobrara
Date	



Stage	TotalClean	TotalSlurry	PumpDownVol	F_ISIP	F_5Min	F_FG	TotallbsWeightP rop	40/70 White Actual Weight	20/40 White Actual Weight	AvePSI	AveRate	MaxRate	MaxHHP	StartFrac	EndFrac
1	5,093	5,491	426	3,956	3,674	0.997	306,400	142,100	164,300	7,223	78.7	80.2	14,924	2/11/18 4:17	2/11/18 5:54
2	4,870	5,274	279	4,031	3,647	1.007	305,800	141,880	163,920	7,265	79.8	81.9	15,146	2/11/18 13:44	2/11/18 15:07
3	4,904	5,281	329	4,003	3,611	1.003	306,010	142,010	164,000	7,062	79.5	81.0	14,774	2/12/18 0:32	2/12/18 1:57
4	5,099	5,487	301	3,890	3,607	0.986	305,860	142,130	163,730	7,295	80.1	81.1	16,233	2/12/18 7:37	2/12/18 9:00
5	4,857	5,206	272	3,906	3,754	0.989	279,750	115,710	164,040	7,391	79.7	80.8	15,962	2/12/18 13:57	2/12/18 15:22
6	4,626	4,964	247	3,947	3,659	0.994	280,090	116,100	163,990	7,025	79.4	80.5	14,567	2/12/18 19:40	2/12/18 20:56
7	4,710	5,057	222	3,882	3,729	0.983	280,040	116,040	164,000	7,026	79.6	80.5	15,575	2/13/18 2:26	2/13/18 3:44
8	4,581	4,930	220	4,027	3,682	1.001	279,830	115,990	163,840	6,776	80.2	82.8	13,897	2/13/18 8:26	2/13/18 9:50
9	4,677	5,039	205	4,301	3,549	1.037	279,730	115,990	163,740	7,192	79.8	81.4	15,285	3/6/18 19:39	3/6/18 21:00
10	4,620	4,985	299	4,496	4,245	1.063	278,320	114,660	163,660	7,117	80.1	81.6	14,734	3/7/18 1:55	3/7/18 3:12
11	5,332	5,678	307	4,754	4,504	1.098	280,490	116,370	164,120	7,784	78.1	80.1	15,359	3/7/18 9:02	3/7/18 10:36
12	4,743	5,105	199	4,841	4,505	1.111	280,180	116,100	164,080	7,743	78.7	80.5	16,242	3/7/18 15:10	3/7/18 16:38
13	4,488	4,829	227	4,508	4,291	1.066	280,250	116,060	164,190	7,326	79.6	81.0	14,640	3/8/18 0:12	3/8/18 1:22
14	6,017	6,373	261	4,573	4,378	1.077	281,600	116,610	164,990	7,544	69.7	71.5	16,463	3/8/18 5:57	3/8/18 7:42
15	4,396	4,748	142	4,725	4,518	1.099	280,860	116,440	164,420	7,687	78.9	79.7	15,740	3/8/18 12:16	3/8/18 13:35
16	4,388	4,719	159	4,695	4,447	1.095	279,450	115,870	163,580	7,286	79.5	80.1	14,417	3/8/18 18:01	3/8/18 19:15
17	4,429	4,789	200	4,821	4,500	1.112	279,540	115,750	163,790	7,247	79.6	80.5	15,016	3/9/18 0:00	3/9/18 1:15
18	4,445	4,787	209	4,663	4,470	1.090	280,940	116,900	164,040	7,533	79.5	80.5	15,506	3/9/18 5:46	3/9/18 7:03
19	4,313	4,662	114	4,547	4,360	1.074	280,650	115,900	164,750	7,261	80.2	80.8	15,453	3/9/18 13:13	3/9/18 14:29
20	4,298	4,645	104	4,456	4,245	1.061	279,660	115,840	163,820	7,168	80.0	80.6	14,849	3/9/18 18:05	3/9/18 19:18
21	4,363	4,730	158	4,233	4,073	1.030	279,830	116,030	163,800	6,903	79.1	79.9	14,198	3/9/18 23:21	3/10/18 0:34
22	4,381	4,751	143	4,241	4,060	1.032	279,440	115,300	164,140	6,634	79.4	80.3	14,204	3/10/18 4:02	3/10/18 5:19
23	4,318	4,646	82	4,109	3,948	1.014	279,790	116,310	163,480	7,510	84.6	85.6	17,284	3/10/18 7:24	3/10/18 8:37
24	4,389	4,755	166	4,172	3,936	1.023	279,640	116,120	163,520	7,121	84.0	85.3	16,575	3/10/18 11:15	3/10/18 12:34
25	4,309	4,670	72	4,173	4,005	1.023	280,440	116,190	164,250	6,857	89.3	90.4	15,919	3/10/18 14:30	3/10/18 15:39
26	4,281	4,620	60	4,028	3,880	1.002	279,690	115,810	163,880	6,269	88.1	90.0	13,943	3/10/18 19:18	3/10/18 20:29
27	4,224	4,644	71	4,278	4,128	1.036	280,470	116,190	164,280	6,279	84.3	85.4	13,981	3/10/18 23:04	3/11/18 0:19
28	4,245	4,611	68	4,110	3,968	1.012	283,000	118,990	164,010	6,397	88.6	91.2	14,666	3/11/18 4:27	3/11/18 6:01
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Min	4,224	4,611	60	3,882	3,549	0.983	278,320	114,660	163,480	6,269	70	71	13,897		
Max	6,017	6,373	426	4,841	4,518	1.112	306,400	142,130	164,990	7,784	89	91	17,284		
Average	4,621	4,981	198	4,299	4,049	1.040	283,848	119,835	164,013	7,140	81	82	15,198		
Totals	129,396	139,476	5,542				7,947,750	3,355,390	4,592,360				425,552		

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Stage	Actual Flush	Treated Water Vol	LibertyFR Vol	22# Justice Vol	23# Justice Vol	Frac&PD_HCL-15	Frac&PD_FRP-E3 8	Frac&PD_Aquar 714	Frac&PD_SFT-82	Frac&PD_CSA-23	Frac&PD_LG A-3J	Frac&PD_SA FE-BFH	Frac&PD_XL B-88	Frac&PD_B HL-68W
1	307	469	654	3,953		720	19	41	274	196	934	112	294	150
2	300	305	659	3,889		726	19	38	272	193	910	113	296	150
3	296	370	645	3,871		760	20	45	279	189	935	97	284	151
4	295	337	651		4,094	741	21	43	297	202	994	117	321	168
5	291	303	646		3,891	724	21	42	279	192	946	105	287	158
6	286	277	635		3,698	724	18	40	266	184	921	98	284	151
7	285	261	635		3,796	725	19	40	279	185	914	104	294	154
8	283	263	637		3,663	724	22	39	272	185	918	84	268	148
9	386	222	382		3,629	724	12	33	262	167	899	102	276	151
10	310	314	663		3,627	724	22	35	280	192	864	91	291	150
11	259	339	608		4,368	724	19	45	316	210	1,059	119	337	183
12	273	244	626		3,856	724	25	40	285	188	930	103	300	169
13	262	241	589		3,640	724	14	37	313	185	840	91	298	141
14	251	295	607		5,097	667	22	47	377	246	1,232	130	394	213
15	257	177	619		3,583	724	22	39	253	184	856	86	267	151
16	253	356	386		3,629	733	14	34	278	170	864	98	252	156
17	249	213	600		3,599	724	18	37	251	163	828	97	274	151
18	244	241	594		3,593	771	19	36	252	172	852	98	279	156
19	239	132	591		3,573	691	21	41	247	181	840	97	274	148
20	233	157	525		3,599	724	20	36	256	162	915	106	276	149
21	233	167	584		3,595	724	21	37	231	157	841	97	277	142
22	232	152	628		3,584	730	25	35	270	171	859	100	273	154
23	227	121	580		3,600	916	23	40	259	168	849	93	277	147
24	220	204	574	3,594		711	21	34	248	170	850	100	274	160
25	223	121	576	3,595		735	27	33	255	168	819	95	277	151
26	233	75	579	3,580		740	16	38	261	183	800	105	263	159
27	208	92	483	3,601		722	15	34	255	158	818	101	265	157
28	240	135	512	3,581		724	7	34	252	164	807	105	288	155
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Min	208	75	382	3,580	3,573	667	7	33	231	157	800	84	252	141
Max	386	469	663	3,953	5,097	916	27	47	377	246	1,232	130	394	213
Average	263	235	588	3,708	3,786	732	19	38	272	182	896	102	287	156
Totals	7,372	6,580	16,470	29,663	75,715	20,500	542	1,073	7,619	5,085	25,094	2,844	8,040	4,373