

Interval #	Displacement to Top Perf (ft)	Displacement to Top Perf (ft)	Top Perf Measured Depth (ft)	Bottom Perf Measured Depth (ft)	Displacement to Bottom Perf (ft)	Displacement to Bottom Perf (ft)	Total Vertical Depth (ft)	Isolation Type	Isolation Tool Provider	Isolation Tool Name	Number of Clusters (ft)	Total Perforations (ft)	EHD (in)	Shots Per Foot (ft)	Perforation Phasing (ft)	Cluster Spacing (ft)	Interval Technology	Plug Depth MD (ft)	Interval Latitude (ft)	Interval Longitude (ft)
1	16,802	400	18,040	18,194	16,946	403	7281.0	No Isolation	N/A	N/A	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	N/A	40.543471	-104.792719
2	16,635	396	17,860	18,014	16,778	399	7280.8	Plug	Innovex	Swage	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	18,027	40.543510	-104.792048
3	16,467	392	17,680	17,834	16,611	395	7280.2	Plug	Innovex	Swage	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	17,847	40.543543	-104.791372
4	16,300	388	17,500	17,654	16,443	391	7279.9	Plug	Innovex	Swage	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	17,667	40.543555	-104.790695
5	16,132	384	17,320	17,474	16,275	388	7279.8	Plug	Innovex	Swage	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	17,487	40.543560	-104.790059
6	15,964	380	17,140	17,294	16,108	384	7279.4	Plug	Innovex	Swage	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	17,307	40.543574	-104.789682
7	15,797	376	16,960	17,114	15,940	380	7279.4	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	17,127	40.543594	-104.789009
8	15,629	372	16,780	16,934	15,772	376	7279.0	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	16,947	40.543589	-104.788332
9	15,461	368	16,600	16,754	15,605	372	7278.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	iflow, HHP Opti	16,767	40.543562	-104.787659
10	15,294	364	16,420	16,574	15,437	368	7279.0	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	16,587	40.543509	-104.786982
11	15,126	360	16,240	16,394	15,269	364	7278.6	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	16,407	40.543497	-104.786305
12	14,958	356	16,060	16,214	15,102	360	7278.2	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	16,227	40.543481	-104.785628
13	14,791	352	15,880	16,034	14,934	356	7278.2	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	16,047	40.543481	-104.784948
14	14,623	348	15,700	15,854	14,766	352	7277.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	15,867	40.543519	-104.784269
15	14,455	344	15,520	15,674	14,599	348	7276.4	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	15,687	40.543558	-104.783594
16	14,288	340	15,340	15,494	14,431	344	7275.4	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	15,507	40.543583	-104.783259
17	14,120	336	15,160	15,314	14,263	340	7273.4	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	15,327	40.543626	-104.782581
18	13,952	332	14,980	15,134	14,096	336	7271.7	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	15,147	40.543644	-104.781904
19	13,785	328	14,800	14,954	13,928	332	7271.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	14,967	40.543658	-104.781231
20	13,617	324	14,620	14,774	13,761	328	7269.9	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	14,787	40.543672	-104.780550
21	13,449	320	14,440	14,594	13,593	324	7267.1	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	14,607	40.543676	-104.779873
22	13,282	316	14,260	14,414	13,425	320	7264.5	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	14,427	40.543651	-104.779194
23	13,114	312	14,080	14,234	13,258	316	7262.1	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	14,247	40.543628	-104.778517
24	12,946	308	13,900	14,054	13,090	312	7260.7	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	14,067	40.543611	-104.777844
25	12,779	304	13,720	13,874	12,922	308	7260.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	13,887	40.543611	-104.777171
26	12,611	300	13,540	13,694	12,755	304	7261.1	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	13,707	40.543622	-104.776831
27	12,444	296	13,360	13,514	12,587	300	7261.7	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	13,527	40.543641	-104.776154
28	12,276	292	13,180	13,334	12,419	296	7262.3	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	13,347	40.543651	-104.775473
29	12,108	288	13,000	13,154	12,252	292	7262.9	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	13,167	40.543656	-104.774796
30	11,941	284	12,820	12,974	12,084	288	7263.3	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	12,987	40.543644	-104.774116
31	11,773	280	12,640	12,794	11,916	284	7263.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	12,807	40.543638	-104.773439
32	11,605	276	12,460	12,614	11,749	280	7263.9	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	12,627	40.543656	-104.772762
33	11,438	272	12,280	12,434	11,581	276	7264.3	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	12,447	40.543668	-104.772082
34	11,270	268	12,100	12,254	11,413	272	7264.9	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	12,267	40.543693	-104.771406
35	11,102	264	11,920	12,074	11,246	268	7265.6	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	12,087	40.543700	-104.770732
36	10,935	260	11,740	11,894	11,078	264	7266.2	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	11,907	40.543690	-104.770092
37	10,767	256	11,560	11,714	10,910	260	7267.9	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	11,727	40.543677	-104.769715
38	10,599	252	11,380	11,534	10,743	256	7268.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	11,547	40.543660	-104.769039
39	10,432	248	11,200	11,354	10,575	252	7269.7	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	11,367	40.543637	-104.768362
40	10,264	244	11,020	11,174	10,407	248	7270.4	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	11,187	40.543620	-104.767685
41	10,096	240	10,840	10,994	10,240	244	7271.3	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	11,007	40.543606	-104.767006
42	9,929	236	10,660	10,814	10,072	240	7271.6	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	10,827	40.543630	-104.766330
43	9,761	232	10,480	10,634	9,905	236	7272.4	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	10,647	40.543683	-104.765655
44	9,593	228	10,300	10,454	9,737	232	7273.2	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	10,467	40.543751	-104.764984
45	9,426	224	10,120	10,274	9,569	228	7274.1	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	10,287	40.543797	-104.764310
46	9,258	220	9,940	10,094	9,402	224	7275.2	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	10,107	40.543802	-104.763633
47	9,090	216	9,760	9,914	9,234	220	7275.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	9,927	40.543787	-104.762957
48	8,923	212	9,580	9,734	9,066	216	7277.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	9,747	40.543735	-104.762623
49	8,755	208	9,400	9,554	8,899	212	7279.8	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	9,567	40.543692	-104.761948
50	8,588	204	9,220	9,374	8,731	208	7282.6	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	9,387	40.543663	-104.761276
51	8,420	200	9,040	9,194	8,563	204	7286.4	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	9,207	40.543647	-104.760599
52	8,252	196	8,860	9,014	8,396	200	7290.1	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	9,027	40.543647	-104.759923
53	8,085	192	8,680	8,834	8,228	196	7294.1	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	8,847	40.543662	-104.759246
54	7,917	188	8,500	8,654	8,060	192	7297.4	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	8,667	40.543682	-104.758569
55	7,749	185	8,320	8,474	7,893	188	7300.0	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	8,487	40.543747	-104.757898
56	7,582	181	8,140	8,294	7,725	184	7302.6	Plug	Geodynamics	Evolv	9	34	0.35	3.4,6	360.00	19.00	CM Dashboard, H	8,307	40.543785	-104.757223
57	7,414	177	7,960	8,114	7,557	180	7304.0											8,127	40.543801	-104.756883

Treatment	Fluids							
	FR Water		PD Treated Water		15% HCl		Total Fluid	
	gal	bbl	gal	bbl	gal	bbl	gal	bbl
1	359,491	46	0	0	998	24	362,413	8,629
2	256,607	132	19,698	469	499	12	282,347	6,723
3	404,674	75	6,300	150	499	12	414,604	9,872
4	214,165	28	19,656	468	1,000	24	236,004	5,619
5	399,652	117	19,152	456	499	12	424,220	10,100
6	214,216	106	18,186	433	250	6	237,108	5,645
7	387,077	82	20,328	484	0	0	410,834	9,782
8	227,840	86	17,388	414	0	0	248,828	5,924
9	384,572	73	17,808	424	0	0	405,447	9,653
10	224,256	71	17,178	409	0	0	244,425	5,820
11	382,208	82	16,548	394	0	0	402,193	9,576
12	220,875	69	16,590	395	0	0	240,367	5,723
13	382,954	73	15,666	373	0	0	401,673	9,564
14	213,892	66	15,960	380	0	0	232,613	5,538
15	380,258	79	14,322	341	0	0	397,909	9,474
16	211,101	83	16,212	386	0	0	230,819	5,496
17	381,756	81	13,902	331	0	0	399,046	9,501
18	210,207	75	15,498	369	0	0	228,869	5,449
19	380,544	86	20,370	485	0	0	404,532	9,632
20	210,496	79	17,220	410	0	0	231,049	5,501
21	377,739	84	17,640	420	0	0	398,925	9,498
22	209,556	78	15,960	380	0	0	228,781	5,447
23	376,909	80	14,070	335	0	0	394,334	9,389
24	211,416	96	13,860	330	0	0	229,303	5,460
25	377,050	91	14,070	335	0	0	394,952	9,404
26	205,798	82	12,810	305	0	0	222,039	5,287
27	375,785	106	18,060	430	0	0	398,314	9,484
28	208,436	71	12,894	307	0	0	224,307	5,341
29	386,017	76	12,264	292	0	0	401,454	9,558
30	206,736	104	11,802	281	0	0	222,901	5,307
31	377,384	73	11,592	276	0	0	392,047	9,334
32	208,087	78	10,458	249	0	0	221,813	5,281
33	379,826	83	13,062	311	0	0	396,373	9,437
34	214,039	74	9,996	238	0	0	227,143	5,408
35	377,096	75	13,398	319	0	0	393,662	9,373
36	208,234	99	12,390	295	0	0	224,774	5,352
37	378,800	76	8,652	206	0	0	390,636	9,301
38	213,424	90	8,400	200	0	0	225,613	5,372
39	381,151	80	7,980	190	0	0	392,488	9,345
40	208,903	80	7,392	176	0	0	219,673	5,230
41	402,986	90	11,088	264	0	0	417,860	9,949
42	212,748	54	5,838	139	0	0	220,859	5,259
43	374,296	95	10,122	241	0	0	388,404	9,248
44	231,135	95	5,166	123	0	0	240,278	5,721
45	380,533	87	8,442	201	0	0	392,648	9,349
46	203,781	77	4,326	103	0	0	211,322	5,031
47	378,155	88	9,114	217	0	0	390,970	9,309
48	203,229	94	3,822	91	0	0	210,992	5,024
49	377,085	73	8,568	204	0	0	388,700	9,255
50	202,989	83	3,318	79	0	0	209,775	4,995
51	374,089	80	7,896	188	0	0	385,357	9,175
52	203,729	85	2,898	69	0	0	210,193	5,005
53	372,288	76	6,888	164	0	0	382,388	9,104
54	202,341	102	3,108	74	0	0	209,727	4,993
55	373,705	77	2,184	52	0	0	379,118	9,027
56	200,286	84	1,638	39	0	0	205,435	4,891
57	0	0	0	0	0	0	0	0

Fluids							
FR Water		PD Treated Water		15% HCl		Total Fluid	
gal	bbl	gal	bbl	gal	bbl	gal	bbl
16,622,600	4,604	659,148	15,694	3,745	89	17,478,859	416,163

Treatment	Proppants - Tickets			
	100 Mesh	40/70	30/50	Total Proppant
	lbs	lbs	lbs	lbs
1	23,380	81,020	0	104,400
2	23,600	127,900	84,200	235,700
3	23,540	83,580	125,980	233,100
4	23,140	125,720	88,560	237,420
5	23,220	84,260	124,520	232,000
6	23,400	125,940	85,440	234,780
7	23,120	86,200	126,380	235,700
8	23,420	125,980	84,586	233,986
9	23,780	84,070	124,940	232,790
10	23,380	127,480	87,320	238,180
11	23,400	83,620	126,000	233,020
12	23,400	125,080	81,120	229,600
13	23,380	84,580	125,940	233,900
14	24,060	125,960	84,580	234,600
15	23,400	83,620	124,400	231,420
16	23,400	125,980	84,930	234,310
17	23,200	84,600	125,580	233,380
18	23,400	125,960	84,560	233,920
19	23,400	84,600	133,140	241,140
20	26,000	125,990	79,040	231,030
21	22,040	83,160	124,240	229,440
22	23,400	125,980	80,620	230,000
23	23,240	86,080	130,580	239,900
24	23,400	125,980	84,420	233,800
25	23,400	84,600	125,980	233,980
26	25,500	125,260	69,580	220,340
27	24,420	85,900	127,440	237,760
28	23,400	125,780	84,640	233,820
29	22,200	84,560	126,600	233,360
30	23,200	125,560	88,060	236,820
31	22,000	84,600	148,940	255,540
32	22,820	128,300	82,220	233,340
33	22,420	84,580	124,980	231,980
34	23,400	128,160	72,760	224,320
35	23,340	84,140	128,200	235,680
36	22,780	127,060	86,280	236,120
37	23,700	84,620	126,160	234,480
38	23,400	123,120	85,360	231,880
39	23,400	84,580	124,540	232,520
40	23,400	128,140	84,600	236,140
41	23,400	83,640	126,020	233,060
42	22,980	124,180	83,520	230,680
43	23,360	84,560	126,020	233,940
44	23,700	125,540	84,820	234,060
45	23,500	83,000	125,120	231,620
46	23,420	126,360	84,320	234,100
47	23,400	84,500	125,720	233,620
48	23,400	128,500	84,600	236,500
49	23,400	84,640	125,900	233,940
50	23,400	125,980	84,590	233,970
51	23,400	83,240	125,940	232,580
52	23,400	126,300	85,000	234,700
53	23,380	83,780	126,000	233,160
54	23,200	125,500	85,860	234,560
55	23,600	84,440	125,960	234,000
56	23,400	125,940	82,940	232,280
57	0	0	0	0

Proppants			
100 Mesh	40/70	30/50	Total Proppant
lbs	lbs	lbs	Total
1,310,220	5,892,400	5,769,746	12,972,366

