



HOBBS OCD

FEB 16 2017

RECEIVED

Stage	Plug Type	plug depth	Perfs				
			Toe sleeve	8 holes	8 holes	8 holes	8 holes
1			13070	12990	12910	12830	12750
2	Stealth	12710	12670	12590	12510	12430	12350
3	Stealth	12310	12270	12190	12110	12030	11950
4	Stealth	11910	11870	11790	11710	11630	11550
5	Stealth	11510	11470	11390	11310	11230	11150
6	Stealth	11110	11070	10990	10910	10830	10750
7	Stealth	10710	10670	10590	10510	10430	10350
8	Stealth	10310	10270	10190	10110	10030	9950
9	Stealth	9910	9870	9790	9710	9630	9550
10	Ball drop	9510	9470	9390	9310	9230	9150
11	Ball drop	9110	9070	8990	8910	8830	8750
12	Ball drop	8710	8670	8590	8510	8430	8350
13	Ball drop	8310	8270	8190	8110	8030	7950
14	Ball drop	7910	7870	7790	7710	7630	7550
15	Ball drop	7510	7470	7390	7310	7230	7150
16	Ball drop	7110	7070	6990	6910	6830	6750
17	Ball drop	6710	6670	6590	6510	6430	6350
18	Ball drop	6310	6270	6190	6110	6030	5950
19	Ball drop	5910	5870	5790	5710	5630	5550
20	Ball drop	5510	5470	5390	5310	5230	5150

Pump schedule for frac stages

WELL / INTERVAL: ARU 17H (San Andreas)

LOCATION: Lea County, NM

PERFS: MD- ~ 5,150'-13070', TVD- ~4,792'

Stages 1-20, 5 clusters/stage, 8 perfs/cluster, 80' spacing

Version 1

Frac Plan A Stages 1, 2, 3, 10, 11, 12

Frac Plan B Stages 4, 5, 6, 13, 14, 15, 16

Frac Plan C Stages 7, 8, 9, 17, 18, 19, 20

Pump 300 lbs powdered scale inhibitor on Step 4 (PAD) in each stage



Stages 1, 2, 3, 10, 11, 12
Frac A

	proppant		Vol water	rate (BPM)	concentration	lbs	time (min)
1	15 % HCL	acid	2000	20			2.38
2	Slick water	spacer	1000	80			0.30
3	15 % HCL	acid	3000	80		0	0.89
4	Slick water	pad	10000	80		0	2.98
5	Slick water	100 mesh slurry	10000	80	0.25	2500	2.98
6	Slick water	sweep	10000	80		0	2.98
7	Slick water	100 mesh slurry	10000	80	0.5	5000	2.98
8	Slick water	sweep	10000	80		0	2.98
9	Slick water	100 mesh slurry	10000	80	0.5	5000	2.98
10	Slick water	sweep	10000	80		0	2.98
11	Slick water	30/50 white slurry	10000	80	0.5	5000	2.98
12	Slick water	30/50 white slurry	10000	80	1	10000	2.98
13	Slick water	30/50 white slurry	10000	80	1.5	15000	2.98
14	Xlinc 20#	30/50 white slurry	10000	80	2	20000	2.98
15	Xlinc 20#	30/50 white slurry	10000	80	2.5	25000	2.98
16	Xlinc 20#	30/50 white slurry	10000	80	3	30000	2.98
17	Xlinc 20#	30/50 resin coat slurry	7000	80	4	28000	2.08
18	Xlinc 20#	spacer	420	80		0	0.13
19	Slick water	flush (Varies	14000	80		0	4.17
19			157420 gal			145500	48.64
20			3748.095238 bbls				0.81
21							
22							

Frac B	Stages 4, 5, 6, 13, 14, 15, 16	proppant	Vol water	rate (BPM)	concentration	lbs	time (min)
	1	15 % HCL	acid	2000	20		2.38
	2	Slick water	spacer	1000	80		0.30
	3	15 % HCL	acid	3000	80	0	0.89
	4	Slick water	pad	12000	80	0	3.57
	5	Slick water	100 mesh slurry	12000	80	0.25	3000
	6	Slick water	sweep	12000	80		0
	7	Slick water	100 mesh slurry	12000	80	0.5	6000
	8	Slick water	sweep	12000	80		0
	9	Slick water	100 mesh slurry	12000	80	0.5	6000
	10	Slick water	sweep	12000	80		0
	11	Slick water	30/50 white slurry	12000	80	0.5	6000
	12	Slick water	30/50 white slurry	12000	80	1	12000
	13	Slick water	30/50 white slurry	12000	80	1.5	18000
	14	Xlinc 20#	30/50 white slurry	12000	80	2	24000
	15	Xlinc 20#	30/50 white slurry	12000	80	2.5	30000
	16	Xlinc 20#	30/50 white slurry	12000	80	3	36000
	17	Xlinc 20#	30/50 resin coat slurry	10000	80	4	40000
	18	Xlinc 20#	spacer	420	80		0
	19	Slick water	flush (Varies	14000	80		0
	19		186420 gal			181000	57.27
	20		4438.571429 bbls				0.95

Frac C	Stages 7, 8, 9, 17, 18, 19, 20	proppant	Vol water	rate (BPM)	concentration	lbs	time (min)
	1	15 % HCL	acid	2000	20		2.38
	2	Slick water	spacer	1000	80		0.30
	3	15 % HCL	acid	3000	80	0	0.89
	4	Slick water	pad	15000	80	0	4.46
	5	Slick water	100 mesh slurry	15000	80	0.25	3750
	6	Slick water	sweep	15000	80		0
	7	Slick water	100 mesh slurry	15000	80	0.5	7500
	8	Slick water	sweep	15000	80		0
	9	Slick water	100 mesh slurry	15000	80	0.5	7500
	10	Slick water	sweep	15000	80		0
	11	Slick water	30/50 white slurry	15000	80	0.5	7500
	12	Slick water	30/50 white slurry	15000	80	1	15000
	13	Slick water	30/50 white slurry	15000	80	1.5	22500
	14	Xlinc 20#	30/50 white slurry	15000	80	2	30000
	15	Xlinc 20#	30/50 white slurry	15000	80	2.5	37500
	16	Xlinc 20#	30/50 white slurry	15000	80	3	45000
	17	Xlinc 20#	30/50 resin coat slurry	10000	80	4	40000
	18	Xlinc 20#	spacer	420	80		0
	19	Slick water	flush (Varies	14000	80		0
	19		225420 gal			216250	68.88
	20		5367.142857 bbls				1.15