GasGun® Stimulation vs. Traditional Stage Frac

In December 2005, a major Canadian producer decided to test the GasGun against traditional stage fracs in twelve shallow gas wells of the Basal Belly River formation in Alberta, Canada. They stimulated six wells with the GasGun and six with 5 tonne sand fracs. The operator then conducted a pressure transient analysis on each well. Results of this analysis show the calculated parameters to be remarkably similar between these two methods and that the effectiveness of the stimulations to be roughly equivalent. The producer chose the GasGun over hydraulic fracturing for the rest of the field because it is considerably less expensive.

GasGun						
	BHP (kPa)	Skin Factor	XF (m)	eff. K (mD)	kH (mD.m)	Production (MCF/D)
Well #1	879	-0.44		0.26	1.04	2
Well #2	1541	-4.90	20.0	0.40	2.00	22
Well #3	1735	-4.59	18.0	0.45	2.25	26
Well #4	1419	-4.42	35.8	0.77	3.85	18
Well #5	1302	-5.10	31.8	0.50	1.50	15
Well #6	1343	-3.90	24.8	0.90	3.84	18
Average*	1469	-4.58	26.1	0.60	2.69	20

Stage Frac						
	BHP (kPa)	Skin Factor	XF (m)	eff. K (mD)	kH (mD.m)	Production (MCF/D)
Well #1	1622	-4.65	21.4	0.40	1.20	18
Well #2	1197	-4.71	32.5	1.13	5.65	25
Well #3	1144	-4.15		1.85	7.40	15
Well #4	1414	-4.84	26.5	0.30	1.50	9
Well #5	903	-4.06	20.8	1.39	6.95	
Well #6	1002	-4.66	38.4	2.56	12.80	40
Average	1214	-4.51	27.9	1.27	5.92	21

* Averages for GasGun data excludes Well #1 on the basis of it being anomalous when compared with the others

Xf is fracture half length in meters
Eff K is the effective permeability in millidarcies
kH is the perm from the PTA results multiplied by the height of the pay zone