

Appendix

Table 1. Principal component data of different fractured wells

Well No.	Principal component1	Principal component2	Principal component3	Principal component4	Principal component5	Principal component6
W1	-1.3249	-2.8963	2.8282	2.4552	0.1009	-1.3387
W 2	-1.1123	-2.6196	2.0420	3.7053	0.6052	1.1145
W 3	-2.5976	-2.2137	0.3249	-2.4634	0.3520	1.1733
W 4	0.2760	-1.1292	0.5904	-1.5472	0.6807	-0.0133
W 5	-1.6769	0.6811	-0.6841	-0.4879	-1.4563	-1.1141
W 6	-0.2516	-1.0280	0.9101	-2.5044	-0.1983	-0.0944
W 7	-1.5444	-2.1671	0.5315	-2.1546	-0.4538	-0.1743
W 8	0.6155	-0.4797	0.7742	-1.4991	0.2933	-1.6077
W 9	-0.7563	-0.1614	-1.0478	0.3492	-1.8909	-0.0960
W 10	0.3337	0.8791	-1.9213	1.2324	0.0067	-1.1216
W 11	0.7963	0.7402	-0.2539	0.4779	0.7462	-0.7994
W 12	0.3705	0.5211	-2.3173	0.8911	-0.9771	-0.3252
W 13	0.2257	-2.2918	-2.6299	0.8301	-1.3737	0.0350
W 14	-1.2708	2.6957	0.2617	0.3647	0.0669	0.2120
W 15	-1.7091	2.1912	-0.0920	0.6412	0.3333	-0.6138
W 16	-2.0304	2.1800	0.0535	0.1841	0.1872	-0.4825
W 17	0.7544	3.6574	2.8197	-0.1698	-1.0364	1.8310
W 18	0.2957	2.2135	1.8955	-0.2037	0.2244	-0.6716
W 19	-1.7429	0.1319	-2.5914	0.0063	3.4467	0.7170
W 20	-1.8670	0.2006	-1.2401	0.2454	-0.6390	2.4655
W 21	3.8633	0.6434	0.1124	-0.3844	1.4264	-0.3258
W 22	4.8308	-1.3303	0.0271	-0.5883	-0.4532	0.3293
W 23	5.5224	-0.4183	-0.3934	0.6197	0.0088	0.9009

Table 2. Normalization matrix

Well No.	Principal component1	Principal component2	Principal component3	Principal component4	Principal component5	Principal component6
W1	0.1567	0.0000	1.0000	0.7987	0.3731	0.0660
W 2	0.1829	0.0422	0.8560	1.0000	0.4676	0.6683
W 3	0.0000	0.1041	0.5414	0.0066	0.4202	0.6828
W 4	0.3539	0.2696	0.5900	0.1541	0.4818	0.3914
W 5	0.1134	0.5459	0.3565	0.3247	0.0814	0.1212
W 6	0.2889	0.2851	0.6486	0.0000	0.3171	0.3715
W 7	0.1297	0.1113	0.5792	0.0563	0.2692	0.3519
W 8	0.3957	0.3687	0.6237	0.1619	0.4092	0.0000
W 9	0.2268	0.4173	0.2899	0.4595	0.0000	0.3711
W 10	0.3610	0.5761	0.1298	0.6018	0.3555	0.1193
W 11	0.4180	0.5549	0.4353	0.4803	0.4941	0.1984
W 12	0.3655	0.5214	0.0573	0.5468	0.1712	0.3149
W 13	0.3477	0.0922	0.0000	0.5370	0.0969	0.4033

W 14	0.1634	0.8533	0.5298	0.4620	0.3668	0.4468
W 15	0.1094	0.7763	0.4650	0.5066	0.4167	0.2440
W 16	0.0698	0.7746	0.4916	0.4330	0.3893	0.2762
W 17	0.4128	1.0000	0.9984	0.3760	0.1601	0.8442
W 18	0.3563	0.7797	0.8291	0.3705	0.3963	0.2298
W 19	0.1053	0.4621	0.0071	0.4043	1.0000	0.5707
W 20	0.0900	0.4725	0.2546	0.4428	0.2345	1.0000
W 21	0.7957	0.5401	0.5024	0.3414	0.6215	0.3147
W 22	0.9148	0.2389	0.4868	0.3086	0.2693	0.4755
W 23	1.0000	0.3781	0.4097	0.5031	0.3559	0.6159

Table3. Fuzzy set of comprehensive evaluation of different fractured wells

Well No.	I	II	III	IV
W1	0.6	0.1058	0.0394	0.2548
W 2	0.5746	0.2106	0.0288	0.1860
W 3	0.6298	0.0738	0.0660	0.2304
W 4	0.0519	0.5912	0.2177	0.1391
W 5	0.6186	0.1419	0.1168	0.1226
W 6	0.2117	0.4032	0.2291	0.1560
W 7	0.6033	0.0208	0.1227	0.2532
W 8	0	0.5697	0.2846	0.1457
W 9	0.3817	0.3379	0.2397	0.0407
W 10	0.0839	0.7761	0.0723	0.0678
W 11	0.0000	0.7050	0.2494	0.0457
W 12	0.0737	0.7358	0.1427	0.0479
W 13	0.1175	0.6140	0.0894	0.1791
W 14	0.6477	0.1760	0.1750	0.0013
W 15	0.6992	0.1418	0.1251	0.0339
W 16	0.6983	0.1062	0.1699	0.0255
W 17	0.1961	0.5302	0.1892	0.0845
W 18	0.1322	0.6255	0.1620	0.0803
W 19	0.7049	0.1099	0.1852	0
W 20	0.7038	0.1052	0.1687	0.0223
W 21	0	0.1559	0.3965	0.4476
W 22	0	0.0539	0.2144	0.7317
W 23	0	0.1540	0.2281	0.6179