

Table 2. Concentrations of major element for the sandstone from Huangliu formation (in wt.% oxide).

Well	SN	M/ μm	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	K ₂ O	CaO	TiO ₂	MnO	(Fe ₂ O ₃) _t	LOI	SUM	(SiO ₂) _{adj}	Al ₂ O ₃ / TiO ₂	SiO ₂ / Al ₂ O ₃	CIA
B-8	1	120 (vf)	1.24	2.17	12.20	65.72	0.15	2.69	3.51	0.74	0.06	5.54	5.76	99.38	69.90	16.49	5.39	63.55
	2	120 (vf)	1.09	1.90	10.57	71.15	0.12	2.25	2.78	0.69	0.05	4.96	4.62	99.82	74.44	15.38	6.73	63.64
	3	160 (f)	0.98	1.23	7.93	77.40	0.12	1.78	2.74	0.53	0.04	3.43	3.86	99.80	80.47	15.00	9.76	60.61
	4	150 (f)	0.97	1.08	6.69	75.37	0.10	1.72	5.08	0.45	0.08	2.92	5.31	99.55	79.78	14.73	11.27	56.94
	5	150 (f)	1.10	1.56	8.81	75.08	0.11	2.11	2.31	0.58	0.04	4.39	3.74	99.49	78.12	15.25	8.52	59.78
	6	160 (f)	1.04	1.34	7.74	77.63	0.10	2.01	2.47	0.52	0.04	3.65	3.59	99.84	80.40	14.88	10.03	58.01
	7	180 (f)	0.90	1.11	6.84	82.42	0.10	1.77	0.99	0.62	0.02	3.08	2.31	99.92	84.22	11.03	12.05	58.35
	8	170 (f)	0.93	1.16	7.32	80.55	0.10	1.90	1.72	0.43	0.04	3.32	2.73	99.93	82.63	17.02	11.00	58.83
	9	180 (f)	0.82	1.03	6.70	82.79	0.09	1.77	1.07	0.50	0.03	2.93	2.14	99.64	84.71	13.40	12.36	59.19
	10	100 (vf)	1.25	1.46	7.76	75.72	0.10	1.72	2.20	0.56	0.05	3.63	5.66	99.79	80.17	13.86	9.76	56.48
A-2	11	90 (vf)	1.28	1.59	8.08	73.33	0.10	1.78	2.86	0.58	0.07	3.92	6.20	99.47	78.35	13.93	9.08	56.81
	12	90 (vf)	1.19	1.76	11.65	70.67	0.12	1.80	2.13	0.72	0.07	4.23	5.50	99.52	74.91	16.07	6.07	66.52
	13	90 (vf)	1.42	1.57	10.43	73.05	0.12	1.80	2.12	0.71	0.03	3.77	4.92	99.66	76.88	14.69	7.00	61.15
	14	70 (vf)	1.10	1.97	13.05	62.87	0.13	2.65	3.36	1.00	0.04	6.00	7.73	99.44	68.21	13.05	4.82	66.77
	15	70 (vf)	0.97	1.74	12.35	62.80	0.13	2.18	5.96	0.78	0.05	4.76	8.49	99.86	68.46	15.83	5.09	68.97
	16	100 (vf)	1.08	1.32	7.57	78.18	0.10	1.87	1.47	0.60	0.04	3.57	4.49	100.00	81.60	12.62	10.33	57.55
	17	80 (vf)	1.32	1.68	8.86	73.13	0.10	2.10	2.23	0.60	0.04	4.23	5.93	99.86	77.56	14.77	8.25	57.23
	18	80 (vf)	1.28	1.57	8.40	74.37	0.10	2.01	1.91	0.60	0.04	3.90	5.45	99.31	78.96	14.00	8.85	56.78
	19	80 (vf)	1.30	1.61	8.51	74.15	0.10	2.02	1.99	0.60	0.03	3.90	5.62	99.52	78.70	14.17	8.72	56.76
	20	80 (vf)	1.19	1.59	8.39	74.71	0.10	2.05	1.81	0.60	0.04	4.19	5.44	99.77	78.91	13.98	8.90	57.74
A-6	21	100 (vf)	1.18	1.51	8.19	75.76	0.10	1.98	1.65	0.59	0.04	3.81	5.05	99.55	79.90	13.88	9.25	57.59
	22	80 (vf)	1.28	1.93	9.71	70.15	0.12	2.26	2.19	0.73	0.05	5.06	6.60	99.75	75.04	13.30	7.22	59.30
	23	80 (vf)	1.29	1.76	8.73	72.30	0.10	1.99	2.40	0.63	0.05	4.36	6.26	99.53	77.23	13.86	8.28	57.69
	24	80 (vf)	1.24	1.50	8.24	75.17	0.09	1.91	2.37	0.52	0.04	3.46	5.48	99.71	79.50	15.84	9.13	57.26
	25	100 (vf)	1.10	1.43	7.86	76.30	0.11	1.87	2.07	0.60	0.04	3.63	5.17	99.89	80.30	13.10	9.71	58.19
	26	80 (vf)	1.18	1.53	8.53	74.58	0.10	2.04	2.14	0.55	0.04	3.88	5.47	99.72	78.86	15.51	8.74	58.32
	27	100 (vf)	1.21	1.49	8.45	74.98	0.10	2.04	1.80	0.57	0.04	3.95	5.27	99.58	79.23	14.82	8.87	57.70
	28	90 (vf)	1.03	1.54	8.24	74.58	0.10	2.00	2.39	0.55	0.04	3.88	5.71	99.73	79.04	14.98	9.05	59.71

Note: (Fe₂O₃)_t= total Fe expressed as Fe₂O₃; (SiO₂)_{adj}= where (SiO₂)_{adj} refers to the SiO₂ value obtained after volatile-free adjustment of the ten major-elements to 100 wt. %.

CIA= chemical index of alteration. SN=sample number; M=mean grain size from thin section; f=fine-grained sandstone; vf=very fine-grained sandstone