Datashare 98

Organic geochemical characteristics, mineralogy, petrophysical properties, and shale gas prospects of the Wufeng–Longmaxi shales in Sanquan Town of the Nanchuan District, Chongqing

Yijun Zheng, Yuhong Liao, Yunpeng Wang, Yongqiang Xiong, and Ping'an Peng

AAPG Bulletin, v. 102, no. 11 (November 2018), pp. 2239–2265

Table S1. Total Organic Carbon Content and Mineral Compositions of the Wufeng–Longmaxi Shales in the Sanquan-1 Well

Sample No.	Depth (m)	Depth (ft)	TOC (wt.%)	Quartz (%)	Feldspar (%)	Calcite (%)	Dolomite (%)	Pyrite (%)	Brittle Minerals (%)	Chlorite (%)	Illite (%)	Clay Minerals (%)
SQ-11	11.8	38.8	0.53	20.8	14.5	6.5	2.3	2.0	46.1	8.0	46.1	54.1
SQ-12	12.8	42.1	0.64	22.5	16.7	5.6	2.1	2.1	49.0	8.6	42.4	51.0
SQ-13	13.8	45.3	0.70	20.7	14.4	7.5	2.6	2.0	47.2	12.3	40.5	52.8
SQ-14	14.8	48.6	0.72	19.6	14.6	4.4	2.7	5.7	47.0	12.5	40.5	53.0
SQ-15	15.7	51.4	0.65	20.4	14.2	5.8	3.3	1.9	45.6	12.2	42.1	54.3
SQ-16	16.4	53.7	0.62	23.6	16.4	4.6	3.2	1.9	49.7	8.3	41.8	50.1
SQ-17	17.5	57.4	0.91	22.7	15.9	7.6	2.1	2.1	50.4	12.5	37.1	49.6
SQ-18	18.5	60.8	0.91	21.1	16.8	5.0	2.2	5.6	50.7	12.6	36.6	49.2
SQ-19	19.7	64.6	0.94	23.7	16.4	3.0	2.2	1.6	46.9	9.4	43.7	53.1
SQ-20	20.8	68.3	1.36	24.4	16.8	4.0	1.7	6.4	53.3	12.1	34.5	46.6
SQ-21	21.7	71.3	1.35	23.4	16.3	4.6	1.6	5.4	51.3	12.7	36.1	48.8
SQ-22	22.7	74.6	1.26	25.8	17.9	4.5	1.8	6.0	56.0	7.6	36.4	44.0
SQ-23	23.8	78.0	1.25	25.5	17.7	5.5	1.9	2.0	52.6	11.4	36.0	47.4
SQ-24	24.7	81.0	1.41	26.6	18.4	4.7	2.1	2.1	53.9	11.8	34.4	46.2
SQ-25	25.7	84.2	1.40	26.1	19.4	5.1	1.8	2.1	54.5	11.7	33.9	45.6
SQ-26	26.7	87.7	1.64	25.5	19.0	7.3	2.7	2.1	56.6	10.1	33.3	43.4
SQ-27	27.6	90.4	1.59	28.3	19.6	4.4	2.6	2.3	57.2	7.5	35.4	42.9
SQ-28	28.7	94.1	1.59	26.0	16.8	4.9	4.9	2.1	54.7	11.4	33.9	45.3
SQ-29	29.7	97.6	1.61	26.4	17.0	4.1	2.4	5.2	55.1	10.5	34.4	44.9
SQ-30	30.6	100.5	1.51	26.3	17.0	5.7	2.6	2.1	53.7	11.8	34.4	46.2
SQ-31	31.8	104.4	1.40	24.7	17.1	3.6	2.3	5.7	53.4	12.3	34.3	46.6
SQ-32	32.7	107.1	1.24	25.5	16.4	4.5	2.8	2.1	51.3	12.7	36.1	48.8
SQ-33	33.5	109.8	1.30	24.4	15.8	3.0	2.2	5.7	51.1	12.0	36.9	48.9
SQ-34	34.5	113.2	1.46	25.2	17.4	3.1	2.3	5.8	53.8	11.3	34.9	46.2
SQ-35	35.5	116.3	1.44	27.8	17.9	3.2	2.2	2.0	53.1	11.1	35.9	47.0
SQ-36	36.4	119.5	1.05	21.4	14.9	3.1	9.8	2.0	51.2	13.9	34.9	48.8
SQ-37	37.7	123.8	1.28	29.1	15.9	3.0	2.3	4.8	55.1	8.5	36.3	44.8
SQ-38	38.7	127.0	1.34	27.1	14.9	4.7	2.6	1.9	51.2	13.3	35.4	48.7
SQ-39	39.7	130.3	1.43	26.3	15.7	4.6	2.0	5.2	53.8	11.8	34.4	46.2
SQ-40	40.8	133.7	1.46	27.7	16.6	5.3	3.0	1.9	54.5	12.4	33.2	45.6
SQ-41	41.8	137.3	1.26	28.0	16.5	3.1	2.3	5.4	55.3	11.1	33.5	44.6
SQ-42	42.8	140.3	1.32	30.7	16.8	5.4	2.9	1.8	57.6	12.2	30.1	42.3
SQ-43	43.9	143.9	1.26	25.8	16.6	2.9	2.4	5.9	53.6	12.8	33.5	46.3
SQ-44	44.7	146.8	1.06	23.2	16.2	4.4	2.5	1.9	48.2	11.6	40.2	51.8

(*continued*)

Table S1. Continued

Sample No.	Depth (m)	Depth (ft)	TOC (wt.%)	Quartz (%)	Feldspar (%)	Calcite (%)	Dolomite (%)	Pyrite (%)	Brittle Minerals (%)	Chlorite (%)	Illite (%)	Clay Minerals (%)
SQ-45	45.8	150.2	1.10	25.1	16.1	3.1	2.0	5.6	51.9	12.5	35.6	48.1
SQ-46	46.7	153.3	1.10	25.0	16.2	3.9	2.3	2.0	49.4	12.3	38.2	50.5
SQ-47	47.7	156.6	1.06	25.6	16.5	2.9	2.3	5.1	52.4	11.5	36.2	47.7
SQ-48	48.8	159.9	1.08	24.5	15.8	5.1	2.2	1.7	49.3	13.3	37.4	50.7
SQ-49	49.5	162.3	1.09	24.0	16.6	2.7	2.5	5.6	51.4	12.0	36.6	48.6
SQ-50	50.5	165.7	0.95	25.2	15.1	3.7	2.8	2.1	48.9	12.6	38.5	51.1
SQ-51	51.0	167.3	1.21	27.6	16.4	3.1	2.2	5.5	54.8	12.2	32.9	45.1
SQ-52	52.8	173.4	0.91	22.3	16.6	3.3	2.8	5.1	50.1	13.3	36.5	49.8
SQ-53	53.4	175.3	1.06	24.1	15.6	2.7	2.5	5.6	50.5	13.0	36.5	49.5
SQ-54	54.8	179.9	0.99	26.5	15.8	3.9	2.7	1.9	50.8	11.7	37.5	49.2
SQ-55	55.7	182.9	0.78	26.7	17.2	3.2	2.3	5.3	54.7	10.4	34.9	45.3
SQ-56	56.5	185.2	0.68	26.4	15.8	3.8	2.4	1.9	50.3	13.1	36.6	49.7
SQ-57	57.8	189.6	0.76	31.1	18.4	2.9	2.3	1.7	56.4	10.8	32.7	43.5
SQ-58	58.7	192.7	0.72	22.9	19.3	3.4	2.6	1.9	50.1	12.5	37.5	50.0
SQ-59	59.7	196.0	1.14	24.7	17.2	2.3	2.1	4.9	51.2	11.1	37.7	48.8
SQ-60	60.5	198.4	1.18	23.5	16.4	2.5	2.1	1.7	46.2	10.5	43.4	53.9
SQ-61	61.6	202.2	1.34	27.0	20.1	2.9	2.2	5.3	57.5	9.4	33.0	42.4
SQ-62a	62.3	204.4	1.44	27.3	20.4	3.7	2.7	1.6	55.7	10.7	33.5	44.2
SQ-62b	62.8	205.9	1.43	25.6	20.4	4.1	2.4	1.8	54.3	10.2	35.5	45.7
SQ-63a	63.1	207.1	1.39	25.6	21.5	4.5	2.9	2.1	56.6	6.7	36.8	43.5
SQ-63b	63.7	208.9	1.59	24.2	20.5	3.9	2.3	1.7	52.6	7.1	40.3	47.4
SQ-64a	64.2	210.6	1.69	26.5	21.1	4.2	2.5	1.8	56.1	9.2	34.7	43.9
SQ-64b	64.6	212.1	1.65	26.1	20.7	3.5	2.7	5.2	58.2	6.9	34.8	41.7
SQ-65a	65.1	213.6	1.48	26.8	20.0	4.7	3.4	1.8	56.7	10.4	32.8	43.2
SQ-65b	65.7	215.4	2.23	24.5	19.5	3.6	2.3	6.5	56.4	9.7	33.9	43.6
SQ-66a	66.2	217.2	2.25	26.1	18.2	3.8	2.6	1.9	52.6	11.6	36.0	47.6
SQ-66b	66.8	219.1	2.65	28.6	17.0	2.6	2.3	5.7	56.2	11.1	32.7	43.8
SQ-67a	67.2	220.5	2.28	28.6	18.4	3.5	2.8	2.0	55.3	6.7	38.0	44.7
SQ-67b	67.6	221.8	2.65	29.4	16.0	2.7	2.4	5.8	56.3	10.1	33.6	43.7
SQ-68a	68.1	223.4	2.32	29.3	17.5	4.3	3.6	1.7	56.4	10.2	33.3	43.5
SQ-68b	68.6	225.2	2.55	26.2	15.7	3.9	2.2	5.2	53.2	10.4	36.3	46.7
SQ-69	69.3	227.3	2.18	28.8	15.6	3.9	10.1	2.0	60.4	5.9	33.6	39.5
SQ-70a	70.2	230.5	2.38	32.8	17.9	3.3	3.0	1.9	58.9	5.8	35.2	41.0
SQ-70b	70.8	232.1	2.48	31.3	17.1	3.8	2.7	2.6	57.5	9.4	33.0	42.4
SQ-71a	71.2	233.7	2.65	33.6	15.1	3.6	2.2	5.5	60.0	6.8	33.2	40.0
SQ-71b	71.8	235.4	2.49	34.0	16.9	4.5	2.6	2.0	60.0	6.0	34.0	40.0
SQ-72a	72.2	237.0	2.32	32.1	16.0	2.6	2.9	6.2	59.8	5.6	34.6	40.2
SQ-72b	72.7	238.6	2.53	33.8	15.1	3.2	3.4	2.0	57.5	6.0	36.6	42.6
SQ-73a	73.3	240.4	2.40	29.0	18.7	3.0	2.3	5.8	58.8	6.0	35.3	41.3
SQ-73b	73.7	242.0	2.65	27.2	17.5	4.4	3.1	2.5	54.7	12.2	33.2	45.4
SQ-74a	74.2	243.4	2.69	31.1	16.9	4.6	3.4	2.1	58.1	9.2	32.7	41.9
SQ-74b	74.6	244.6	2.90	31.7	17.4	4.3	2.4	2.2	58.0	10.9	31.1	42.0
SQ-75a	75.1	246.5	3.16	35.0	15.7	4.3	3.1	2.1	60.2	5.2	34.7	39.9
SQ-75b	75.6	248.1	3.34	32.5	16.2	3.7	3.0	6.5	61.9	5.7	32.5	38.2

(*continued*)

Table S1. Continued

Sample No.	Depth (m)	Depth (ft)	TOC (wt.%)	Quartz (%)	Feldspar (%)	Calcite (%)	Dolomite (%)	Pyrite (%)	Brittle Minerals (%)	Chlorite (%)	Illite (%)	Clay Minerals (%)
SQ-76a	76.2	249.9	3.27	30.3	15.0	4.5	2.7	2.4	54.9	10.5	34.6	45.1
SQ-76b	76.6	251.4	3.07	34.7	15.5	4.7	2.2	2.4	59.5	5.9	34.5	40.4
SQ-77a	77.2	253.1	2.88	33.2	14.9	4.5	2.9	2.0	57.5	9.9	32.6	42.5
SQ-77b	77.7	254.9	2.90	29.8	14.8	6.0	1.9	6.8	59.3	6.0	34.7	40.7
SQ-78a	78.3	256.9	2.58	32.4	16.1	7.9	2.8	1.9	61.1	9.7	29.2	38.9
SQ-78b	78.8	258.5	2.82	32.3	14.5	6.1	2.3	6.2	61.4	9.6	29.0	38.6
SQ-79a	79.1	259.4	2.76	33.8	15.0	5.9	2.9	2.3	59.9	10.1	30.0	40.1
SQ-79b	79.7	261.4	2.92	33.3	14.9	5.1	2.3	6.4	62.0	8.3	29.7	38.0
SQ-80a	80.1	262.9	2.85	32.5	14.4	5.7	4.1	1.9	58.6	9.7	31.7	41.4
SQ-80b	80.6	264.4	3.07	39.6	13.8	4.3	2.0	6.5	66.2	7.9	25.9	33.8
SQ-81	81.4	266.9	2.79	37.2	14.8	4.5	4.6	2.2	63.3	9.3	27.4	36.7
SQ-82a	81.9	268.7	2.86	38.2	15.2	4.6	2.8	1.8	62.6	9.3	28.0	37.3
SQ-82b	82.7	271.2	2.49	40.3	14.0	4.4	3.5	1.9	64.1	9.5	26.4	35.9
SQ-83	83.4	273.7	2.68	43.6	15.2	3.2	2.4	5.4	69.8	5.1	25.2	30.3
SQ-84	84.6	277.4	4.11	31.5	17.3	3.0	2.7	2.9	57.4	9.2	33.4	42.6
SQ-85	85.4	280.1	6.53	44.4	13.3	2.9	2.2	5.9	68.7	6.6	24.6	31.2
SQ-86a	85.8	281.6	4.91	44.4	13.1	3.6	2.8	2.1	66.0	8.5	25.4	33.9
SQ-86b	86.9	283.5	4.41	51.5	12.5	3.2	2.2	1.8	71.2	7.7	21.1	28.8
SQ-87a	86.9	285.0	4.02	45.2	13.3	3.7	1.9	1.6	65.7	8.0	26.4	34.4
SQ-87b	87.4	286.7	4.20	53.3	10.6	3.6	2.1	1.3	70.9	8.0	21.1	29.1
SQ-88a	88.1	288.9	2.60	29.3	14.5	2.8	2.2	3.1	51.9	5.9	42.2	48.1
SQ-88b	88.5	290.5	3.45	41.0	12.2	2.8	2.6	5.0	63.6	9.9	26.4	36.3
SQ-89a	89.1	292.2	3.40	34.4	13.6	2.7	1.8	1.5	54.0	6.0	39.9	45.9

Abbreviation: SQ = Sanquan.