

05-071-09063-0000
Pioneer King Kong 11-25R
Purgatoire River/Las Animas Co., Colorado, USA

Gas Shale Characterization (GRI Method) Summary Data															
Sample Depth (feet)	Sample ID	Sample Type	Vendor	Matrix Permeability (md)		Sample Density (gm/cm ³)		Porosity (percent)		Gas Saturation ^{4,5} (percent)	Oil Saturation ⁵ (percent)			Water Saturation ^{5,9} (percent)	Notes
				Effective ¹	Absolute ²	Bulk	Grain	Total ³	Gas Filled ⁴		Oil ⁶	OBM Filtrate ⁷	Total ⁸		
5,601.50	-	PLG	CLB	4.63E-10	-	2.604	2.723	6.23	1.31	21.02	0.00	0.00	0.00	78.98	-
5,605.50	-	PLG	CLB	1.04E-09	-	2.597	2.732	6.89	1.64	23.84	0.00	0.00	0.00	76.16	-
5,607.50	-	PLG	CLB	2.56E-10	-	2.612	2.728	6.34	0.74	11.70	0.00	0.00	0.00	88.30	-
5,619.50	-	PLG	CLB	4.36E-10	-	2.612	2.729	6.32	0.88	14.00	0.00	0.00	0.00	86.00	-
5,637.00	-	PLG	CLB	3.36E-08	-	2.596	2.740	7.28	1.88	25.84	0.00	0.00	0.00	74.16	-
5,649.50	-	PLG	CLB	9.97E-09	-	2.598	2.736	7.00	1.76	25.15	0.00	0.00	0.00	74.85	-
5,665.50	-	PLG	CLB	2.98E-08	-	2.592	2.734	7.38	1.48	20.09	0.00	0.00	0.00	79.91	-
5,678.50	-	PLG	CLB	2.62E-08	-	2.577	2.719	6.97	2.26	32.43	0.00	0.00	0.00	67.57	-
5,692.50	-	PLG	CLB	7.91E-09	-	2.581	2.726	7.19	2.15	29.91	0.00	0.00	0.00	70.09	-
5,720.50	-	PLG	CLB	1.18E-07	-	2.561	2.729	7.62	3.74	49.13	0.00	0.00	0.00	50.87	-
5,745.50	-	PLG	CLB	1.23E-08	-	2.582	2.726	7.12	2.23	31.38	0.00	0.00	0.00	68.62	-
5,770.00	-	PLG	CLB	3.82E-07	-	2.541	2.730	8.36	4.51	53.97	0.00	0.00	0.00	46.03	-
5,775.00	-	PLG	CLB	8.91E-07	-	2.521	2.752	9.81	5.99	61.09	0.00	0.00	0.00	38.91	-
5,785.50	-	PLG	CLB	6.91E-08	-	2.535	2.696	7.65	3.18	41.57	0.00	0.00	0.00	58.43	-
5,798.50	-	PLG	CLB	2.32E-07	-	2.520	2.715	8.72	4.59	52.62	0.00	0.00	0.00	47.38	-
5,812.00	-	PLG	CLB	2.37E-07	-	2.538	2.699	7.70	3.05	39.66	0.00	0.00	0.00	60.34	-
5,822.00	-	PLG	CLB	1.45E-07	-	2.530	2.701	8.10	3.47	42.87	0.00	0.00	0.00	57.13	-
5,837.00	-	PLG	CLB	1.36E-07	-	2.546	2.696	7.00	3.14	44.88	0.00	0.00	0.00	55.12	-
5,850.00	-	PLG	CLB	1.66E-07	-	2.536	2.693	7.15	3.63	50.76	0.00	0.00	0.00	49.24	-
5,862.50	-	PLG	CLB	4.93E-07	-	2.534	2.693	7.32	3.64	49.79	0.00	0.00	0.00	50.21	-
5,875.00	-	PLG	CLB	1.17E-07	-	2.548	2.692	6.75	3.05	45.19	0.00	0.00	0.00	54.81	-
5,887.50	-	PLG	CLB	1.64E-07	-	2.542	2.698	7.12	3.60	50.50	0.00	0.00	0.00	49.50	-
5,900.50	-	PLG	CLB	2.76E-07	-	2.560	2.695	6.22	2.99	48.15	0.00	0.00	0.00	51.85	-
5,914.50	-	PLG	CLB	4.33E-07	-	2.568	2.701	5.76	3.49	60.61	0.00	0.00	0.00	39.39	-
5,924.50	-	PLG	CLB	7.79E-09	-	2.559	2.703	6.80	2.92	42.98	0.00	0.00	0.00	57.02	-
5,953.50	-	PLG	CLB	8.05E-08	-	2.555	2.710	7.16	3.29	45.93	0.00	0.00	0.00	54.07	-
5,971.00	-	PLG	CLB	1.90E-08	-	2.569	2.718	7.06	2.85	40.34	0.00	0.00	0.00	59.66	-
5,987.50	-	PLG	CLB	5.89E-08	-	2.556	2.721	7.49	3.62	48.34	0.00	0.00	0.00	51.66	-
5,998.00	-	PLG	CLB	4.89E-08	-	2.578	2.711	6.25	2.68	42.83	0.00	0.00	0.00	57.17	-
6,010.50	-	PLG	CLB	3.56E-09	-	2.582	2.710	5.88	2.79	47.40	0.00	0.00	0.00	52.60	-
6,019.50	-	PLG	CLB	1.62E-08	-	2.584	2.709	5.77	2.67	46.35	0.00	0.00	0.00	53.65	-
6,034.50	-	PLG	CLB	7.04E-08	-	2.563	2.711	7.00	2.95	42.21	0.00	0.00	0.00	57.79	-

6,050.50	-	PLG	CLB	1.93E-08	-	2.588	2.710	5.66	2.56	45.21	0.00	0.00	0.00	54.79	-
6,065.50	-	PLG	CLB	3.59E-08	-	2.584	2.727	6.78	2.70	39.88	0.00	0.00	0.00	60.12	-
6,074.50	-	PLG	CLB	1.58E-08	-	2.628	2.738	5.28	1.80	34.00	0.00	0.00	0.00	66.00	-
6,089.50	-	PLG	CLB	3.74E-08	-	2.596	2.721	5.94	2.34	39.44	0.00	0.00	0.00	60.56	-
6,102.50	-	PLG	CLB	4.07E-08	-	2.609	2.714	4.73	2.43	51.36	0.00	0.00	0.00	48.64	-

Depth = Measured sample depth

Sample Type:

PLG = Core Plug (Not Specified)

Data Vendor:

CLB = Core Laboratories

¹Calculated from measured pressure-decay data using a fresh, crushed (20/35 mesh size) sample. May be suppressed due to OBM (oil based mud) filtrate invasion, if OBM filtrate is present

²Calculated from measured pressure-decay data using a cleaned and dried, crushed (20/35 mesh size) sample

³Includes all interconnected pore space

⁴As measured by GRI method. May be reduced by filtrate invasion

⁵Saturations determined by Dean-Stark technique using a crushed (20/35 mesh size) and dried at 110 °C sample

⁶Calculated using an ambient oil density of 0.800 gm/cm³

⁷Determined using GC fingerprint comparison

⁸As measured by GRI method. May include OBM filtrate, if present

⁹Calculated using a brine concentration of 30,000 ppm with an ambient density of 1.016 gm/cm³

tr = trace

References:

Development of Laboratory and Petrophysical Techniques for Evaluating Shale Reservoirs, Final Report, GRI-95/0496, Gas Research Institute, April 1996