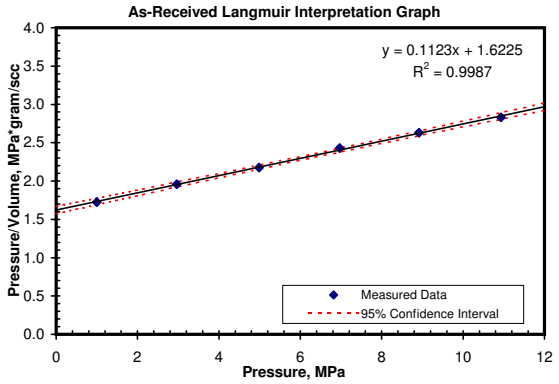
Methane Adsorption Isotherm Summary

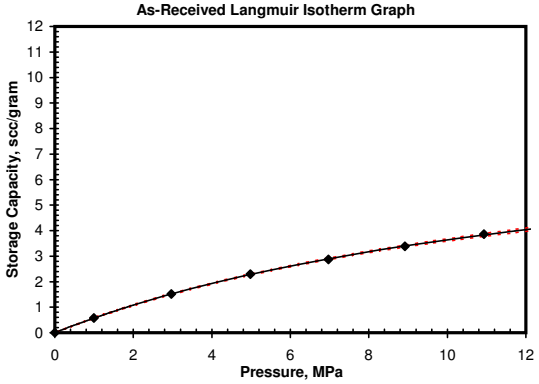
Well:	**CBM 93-004**
Reservoir:	**Unknown**
Sample Number:	45990-10
Sample Type:	coal
Drill Depth, meters:	565.88
Temperature, °C:	57.70
Average Particle Size:	minus 60 mesh
Experimental Moisture Content, fraction:	0.0971
Experimental Ash Content, fraction:	0.2072
"In-Situ" Moisture Content, fraction:	0.1147
"In-Situ" Ash Content, fraction:	0.2072
Notes:	

Pressure	**Methane Storage Capacity, scc/gram**					
MPa	As-Received		Dry, Ash-Free		In-Situ	
	Measured	Calculated	Measured	Calculated	Measured	Calculated
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00	0.58	0.57	0.83	0.83	0.56	0.56
2.97	1.52	1.52	2.18	2.18	1.48	1.48
4.98	2.29	2.28	3.29	3.28	2.23	2.23
6.97	2.87	2.90	4.12	4.17	2.79	2.82
8.92	3.39	3.40	4.87	4.89	3.31	3.31
10.93	3.86	3.84	5.55	5.51	3.76	3.74

Parameters	**Methane Langmuir Parameters (S.I. Units)**		
	As-Received	Dry, Ash-Free	In-Situ
Slope:	0.1123	0.0781	0.1152
Intercept:	1.6225	1.1287	1.6645
Regression Coefficient (squared):	0.9987	0.9987	0.9987
Intercept Variation, Mpa*gram/scc:	0.0488	0.0340	0.0501
Slope Variation, gram/scc:	0.0071	0.0050	0.0073
G_{sL} Variation, scc/gram:	0.0684	0.0983	0.0667
P_L Variation, MPa:	0.4591	0.4591	0.4591
Langmuir Volume, scc/gram:	8.90	12.80	8.68
Langmuir Pressure, MPa:	14.44	14.44	14.44
Langmuir Equation:	V=8.9*P/(P+14.4)	V=12.8*P/(P+14.4)	V=8.7*P/(P+14.4)
Pressure (Midpoint), MPa:	5.54	5.54	5.54
Storage Capacity, scc/gram:	2.47	3.55	2.41

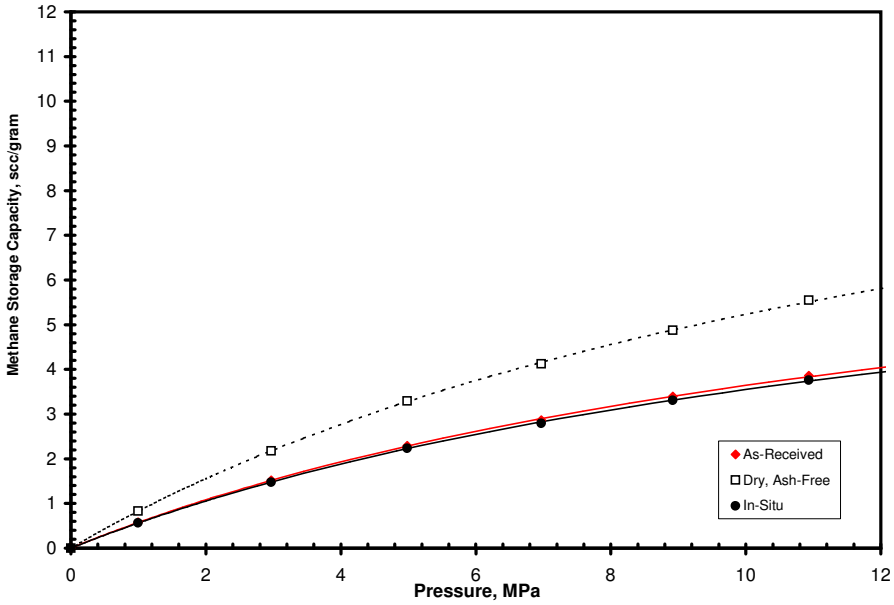
G_s Gas Storage Capacity
G_{sL} Langmuir Gas Storage Capacity
P_L Langmuir Pressure
p Relevant Pressure (Reservoir Pressure)





Methane Adsorption Isotherm Summary Graphs

As-Received, Dry, Ash-Free, In-Situ Langmuir Isotherm Graph



Methane Adsorption Isotherm Summary

Well:	**CBM 93-004**
Reservoir:	**Unknown**
Sample Number:	45990-47
Sample Type:	coal
Drill Depth, meters:	681.03
Temperature, °C:	63.00
Average Particle Size:	minus 60 mesh
Experimental Moisture Content, fraction:	0.1854
Experimental Ash Content, fraction:	0.0707
"In-Situ" Moisture Content, fraction:	0.2046
"In-Situ" Ash Content, fraction:	0.0707
Notes:	

Pressure	**Methane Storage Capacity, scc/gram**					
MPa	As-Received		Dry, Ash-Free		In-Situ	
	Measured	Calculated	Measured	Calculated	Measured	Calculated
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.04	0.61	0.59	0.82	0.79	0.59	0.57
2.96	1.44	1.47	1.94	1.98	1.41	1.43
4.94	2.14	2.18	2.87	2.93	2.08	2.13
6.94	2.74	2.76	3.69	3.71	2.67	2.69
8.92	3.26	3.22	4.38	4.33	3.18	3.14
10.92	3.63	3.62	4.88	4.86	3.54	3.53

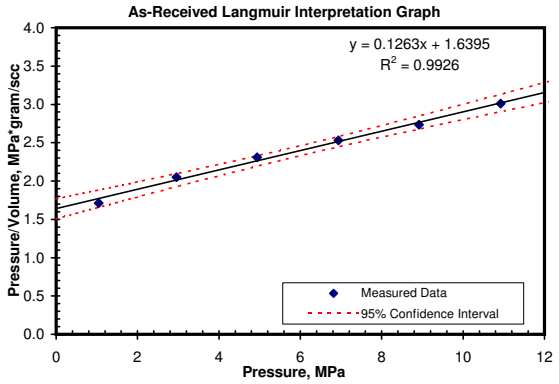
Parameters	**Methane Langmuir Parameters (S.I. Units)**		
	As-Received	Dry, Ash-Free	In-Situ
Slope:	0.1263	0.0939	0.1296
Intercept:	1.6395	1.2196	1.6829
Regression Coefficient (squared):	0.9926	0.9926	0.9926
Intercept Variation, Mpa*gram/scc:	0.1304	0.0970	0.1338
Slope Variation, gram/scc:	0.0190	0.0142	0.0195
G_{sL} Variation, scc/gram:	0.1353	0.1819	0.1319
P_L Variation, MPa:	1.0406	1.0406	1.0406
Langmuir Volume, scc/gram:	7.92	10.64	7.71
Langmuir Pressure, MPa:	12.98	12.98	12.98
Langmuir Equation:	V=7.9*P/(P+13.0)	V=10.6*P/(P+13.0)	V=7.7*P/(P+13.0)
Pressure (Midpoint), MPa:	6.67	6.67	6.67
Storage Capacity, scc/gram:	2.69	3.61	2.62

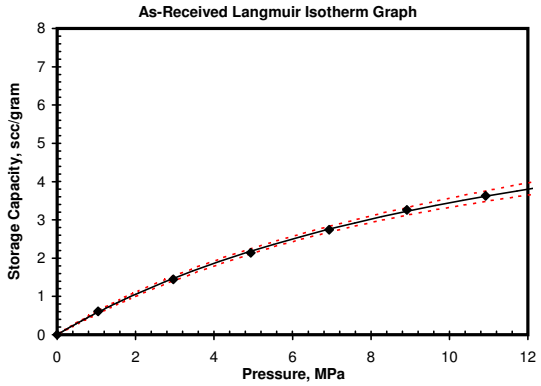
G_s Gas Storage Capacity

G_{sL} Langmuir Gas Storage Capacity

P_L Langmuir Pressure

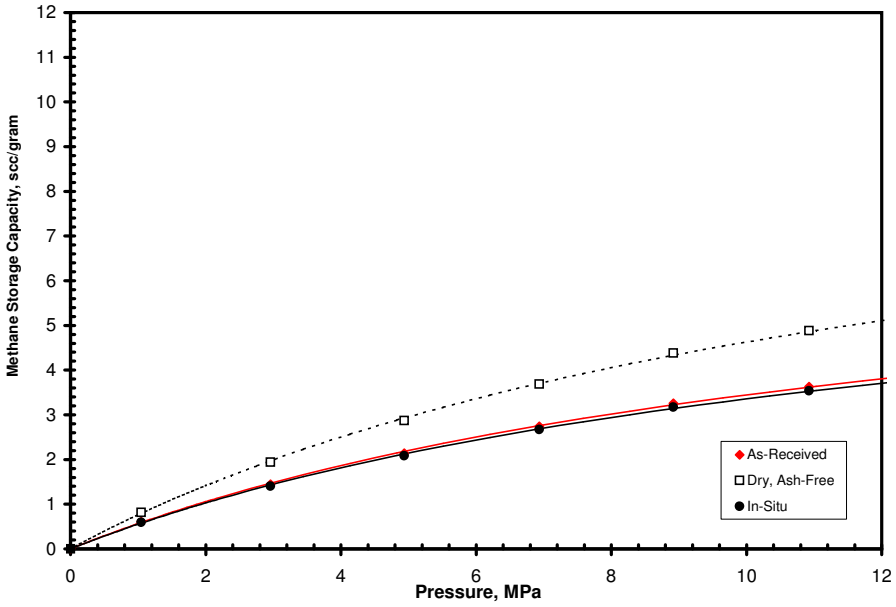
p Relevant Pressure (Reservoir Pressure)





Methane Adsorption Isotherm Summary Graphs

As-Received, Dry, Ash-Free, In-Situ Langmuir Isotherm Graph



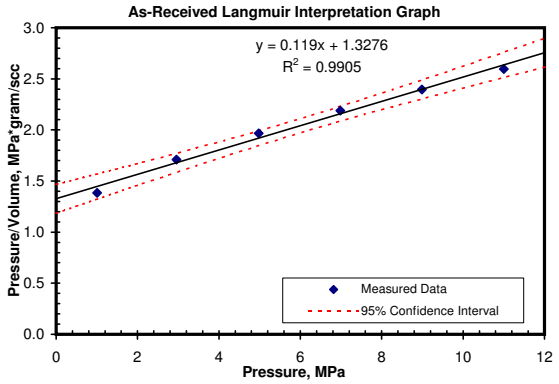
Methane Adsorption Isotherm Summary

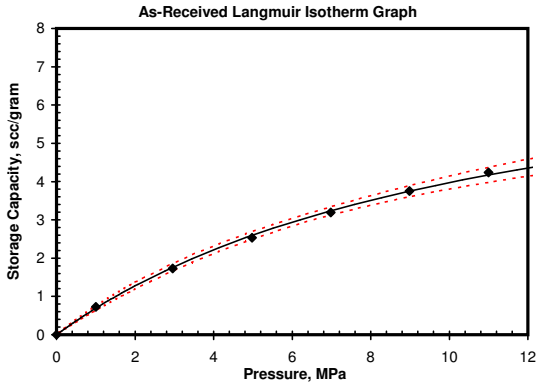
Well:	**CBM 93-004**
Reservoir:	**Unknown**
Sample Number:	45990-82
Sample Type:	coal
Drill Depth, meters:	786.24
Temperature, °C:	70.70
Average Particle Size:	minus 60 mesh
Experimental Moisture Content, fraction:	0.1507
Experimental Ash Content, fraction:	0.0750
"In-Situ" Moisture Content, fraction:	0.1677
"In-Situ" Ash Content, fraction:	0.0750
Notes:	

Pressure	**Methane Storage Capacity, scc/gram**					
MPa	As-Received		Dry, Ash-Free		In-Situ	
	Measured	Calculated	Measured	Calculated	Measured	Calculated
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.01	0.73	0.70	0.94	0.90	0.71	0.68
2.96	1.73	1.76	2.24	2.28	1.69	1.72
4.98	2.53	2.59	3.27	3.35	2.48	2.54
6.98	3.19	3.23	4.12	4.18	3.12	3.16
8.99	3.75	3.75	4.85	4.84	3.67	3.67
11.00	4.24	4.17	5.47	5.39	4.14	4.08

Parameters	**Methane Langmuir Parameters (S.I. Units)**		
	As-Received	Dry, Ash-Free	In-Situ
Slope:	0.1190	0.0921	0.1217
Intercept:	1.3276	1.0279	1.3574
Regression Coefficient (squared):	0.9905	0.9905	0.9905
Intercept Variation, Mpa*gram/scc:	0.1402	0.1085	0.1433
Slope Variation, gram/scc:	0.0203	0.0157	0.0208
G_{sL} Variation, scc/gram:	0.1801	0.2326	0.1762
P_L Variation, MPa:	1.1857	1.1857	1.1857
Langmuir Volume, scc/gram:	8.40	10.85	8.22
Langmuir Pressure, MPa:	11.16	11.16	11.16
Langmuir Equation:	V=8.4*P/(P+11.2)	V=10.9*P/(P+11.2)	V=8.2*P/(P+11.2)
Pressure (Midpoint), MPa:	7.70	7.70	7.70
Storage Capacity, scc/gram:	3.43	4.43	3.36

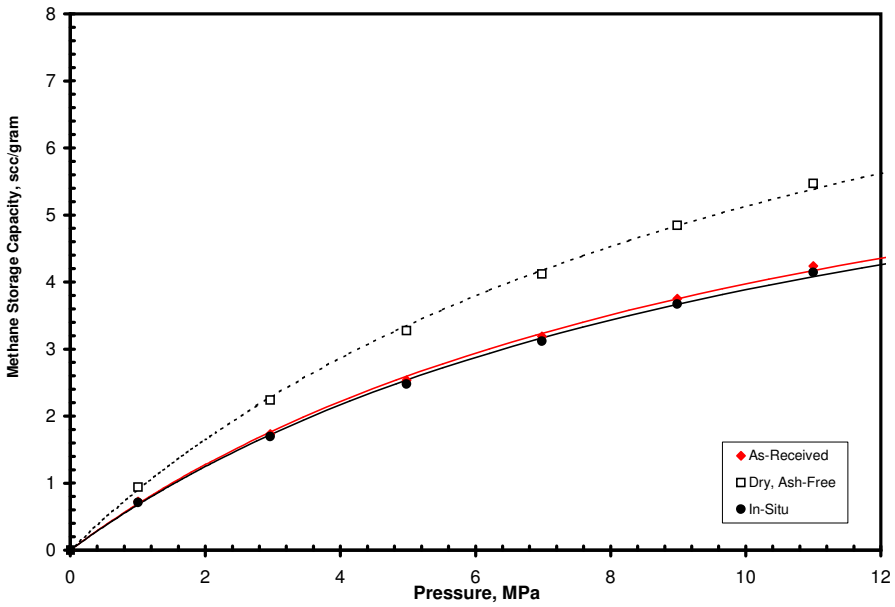
G_s Gas Storage Capacity
G_{sL} Langmuir Gas Storage Capacity
P_L Langmuir Pressure
p Relevant Pressure (Reservoir Pressure)





Methane Adsorption Isotherm Summary Graphs

As-Received, Dry, Ash-Free, In-Situ Langmuir Isotherm Graph



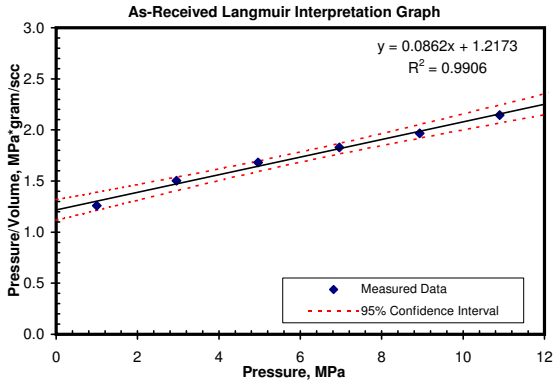
Methane Adsorption Isotherm Summary

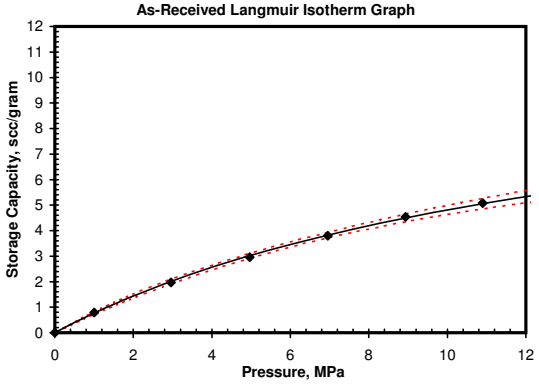
Well:	**CBM 93-004**
Reservoir:	**Unknown**
Sample Number:	45990-92
Sample Type:	coal
Drill Depth, meters:	845.37
Temperature, °C:	70.70
Average Particle Size:	minus 60 mesh
Experimental Moisture Content, fraction:	0.1932
Experimental Ash Content, fraction:	0.0893
"In-Situ" Moisture Content, fraction:	0.2112
"In-Situ" Ash Content, fraction:	0.0893
Notes:	

Pressure	**Methane Storage Capacity, scc/gram**					
MPa	As-Received		Dry, Ash-Free		In-Situ	
	Measured	Calculated	Measured	Calculated	Measured	Calculated
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00	0.80	0.77	1.11	1.07	0.78	0.75
2.96	1.97	2.01	2.74	2.80	1.92	1.96
4.96	2.95	3.02	4.12	4.20	2.88	2.94
6.96	3.80	3.83	5.30	5.34	3.71	3.73
8.93	4.54	4.49	6.33	6.26	4.43	4.38
10.90	5.08	5.05	7.08	7.04	4.95	4.93

Parameters	**Methane Langmuir Parameters (S.I. Units)**		
	As-Received	Dry, Ash-Free	In-Situ
Slope:	0.0862	0.0619	0.0884
Intercept:	1.2173	0.8734	1.2486
Regression Coefficient (squared):	0.9906	0.9906	0.9906
Intercept Variation, Mpa*gram/scc:	0.1008	0.0723	0.1034
Slope Variation, gram/scc:	0.0147	0.0106	0.0151
G_{sL} Variation, scc/gram:	0.2369	0.3302	0.2310
P_L Variation, MPa:	1.2242	1.2242	1.2242
Langmuir Volume, scc/gram:	11.60	16.17	11.31
Langmuir Pressure, MPa:	14.12	14.12	14.12
Langmuir Equation:	V=11.6*P/(P+14.1)	V=16.2*P/(P+14.1)	V=11.3*P/(P+14.1)
Pressure (Midpoint), MPa:	8.28	8.28	8.28
Storage Capacity, scc/gram:	4.29	5.98	4.18

G_s Gas Storage Capacity
G_{sL} Langmuir Gas Storage Capacity
P_L Langmuir Pressure
p Relevant Pressure (Reservoir Pressure)





Methane Adsorption Isotherm Summary Graphs

As-Received, Dry, Ash-Free, In-Situ Langmuir Isotherm Graph