



dig
Dolan Integration Group

Geochemistry for Energy

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Hydrocarbon Gas Composition and Stable Isotopes Data and Interpretation

Job #: 15030413
Lab #: DIG-007175-007178
Client: KP Kauffman
Well Name: Amoco Charter Schneider B6
Amoco Charter Schneider 12
Wagner A2
Seltzer 1A



Client/Well Name: KP Kauffman / Amoco Charter Schneider B6, Amoco Charter Schneider 12, Wagner A2, Seltzer 1A
Job #: 15030413
Lab #: DIG-007175-007178

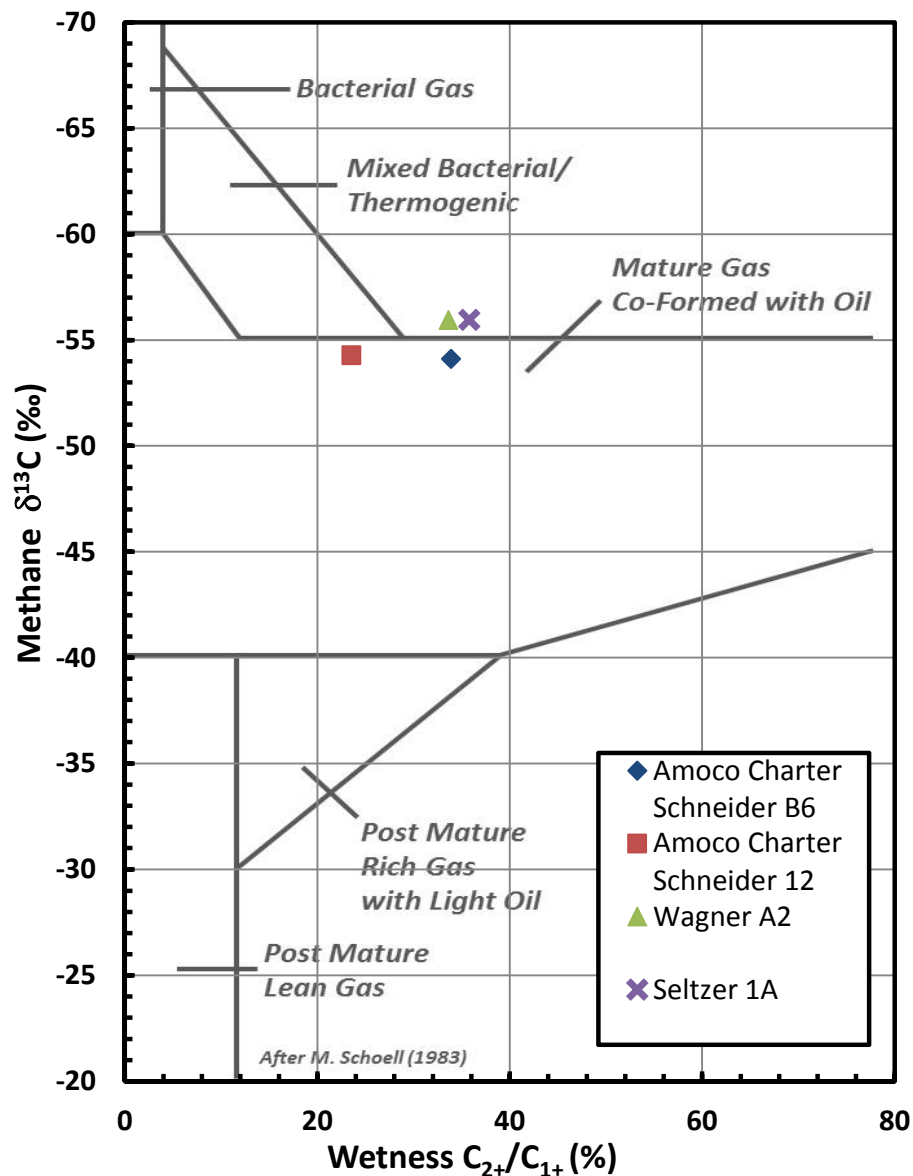
SAMPLE INFORMATION					COMPLETE GAS ANALYSIS														HYDROCARBON GAS ANALYSIS								
Job Number	Lab Number	Well Name	Sample Date	Sample Type	GC Date	N ₂ ppm	O ₂ + Ar ppm	CO ₂ ppm	C ₁ ppm	C ₂ ppm	C ₃ ppm	iC ₄ ppm	nC ₄ ppm	iC ₅ ppm	nC ₅ ppm	C ₆ + ppm	He ppm	H ₂ ppm	C ₁ mol%	C ₂ mol%	C ₃ mol%	iC ₄ mol%	nC ₄ mol%	iC ₅ mol%	nC ₅ mol%	C ₆ + mol%	
15020413	DIG-007175	Amoco Charter Schneider B6	02/27/15	Production																63.6	13.5	10.8	1.6	3.9	1.2	1.6	1.6
15020413	DIG-007176	Amoco Charter Schneider 12	02/27/15	Production																74.4	11.7	7.4	1.0	2.1	0.4	0.3	0.2
15020413	DIG-007177	Wagner A2	02/27/15	Production																63.6	11.0	11.8	2.0	4.8	1.2	1.4	1.2
15020413	DIG-007178	Seltzer 1A	02/27/15	Production																61.7	13.3	11.7	1.9	4.7	1.3	1.5	1.4

SAMPLE INFORMATION					HYDROCARBON RATIOS				STABLE ISOTOPE ANALYSIS										Comments
Job Number	Lab Number	Well Name	Sample Date	Sample Type	Total HC ppm	Wetness % C ₂ to C ₃	C ₁ /C ₂ mol/mol	iC ₄ /nC ₄ mol/mol	Mass Spec Date	δ ¹³ C ₁ ‰ VPDB	δ ¹³ C ₂ ‰ VPDB	δ ¹³ C ₃ ‰ VPDB	δ ¹³ iC ₄ ‰ VPDB	δ ¹³ nC ₄ ‰ VPDB	δ ¹³ iC ₅ ‰ VPDB	δ ¹³ nC ₅ ‰ VPDB	δD _{C1} ‰ VPDB		
15020413	DIG-007175	Amoco Charter Schneider B6	02/27/15	Production	23.9	33.9	4.7	0.4	03/12/14	-54.1	-34.7	-31.3	-33.0	-29.8	-29.6	-29.3	-253		
15020413	DIG-007176	Amoco Charter Schneider 12	02/27/15	Production	23.5	23.5	6.4	0.5	03/12/14	-54.3	-34.5	-31.5	-33.6	-30.6			-218		
15020413	DIG-007177	Wagner A2	02/27/15	Production	33.6	33.6	5.8	0.4	03/12/14	-55.9	-35.2	-31.7	-33.5	-30.1	-29.9	-30.1	-242		
15020413	DIG-007178	Seltzer 1A	02/27/15	Production	35.8	35.8	4.6	0.4	03/12/14	-56.0	-35.4	-31.7	-33.6	-30.4	-29.9	-30.1	-239		

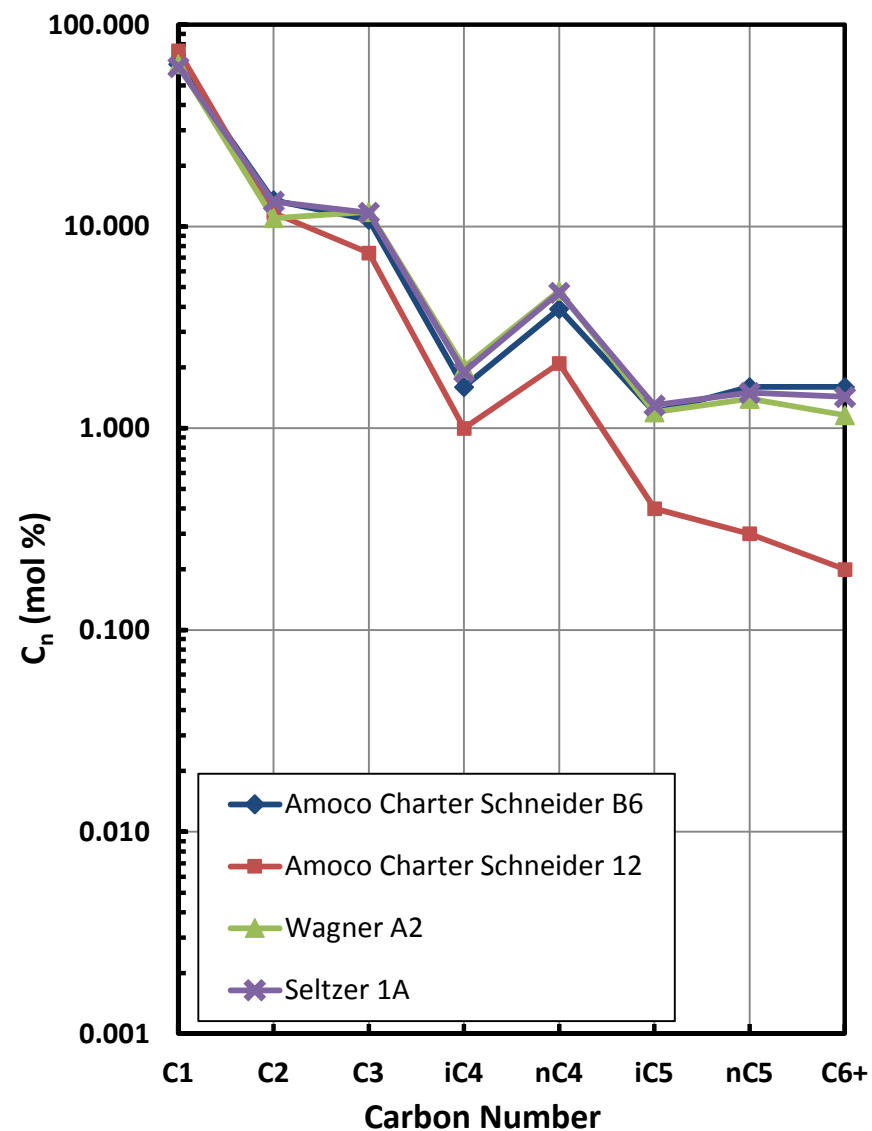
* Stable isotope results based on multi-point laboratory calibration
Values in blue obtained via cryogenic enrichment
Values in red correspond to low peak amplitude; interpret with caution
Precision δ¹³C < 0.5 ‰
Results from outside laboratory

INTERPRETIVE PLOTS

Methane $\delta^{13}\text{C}$ vs Wetness Genetic Classification Plot

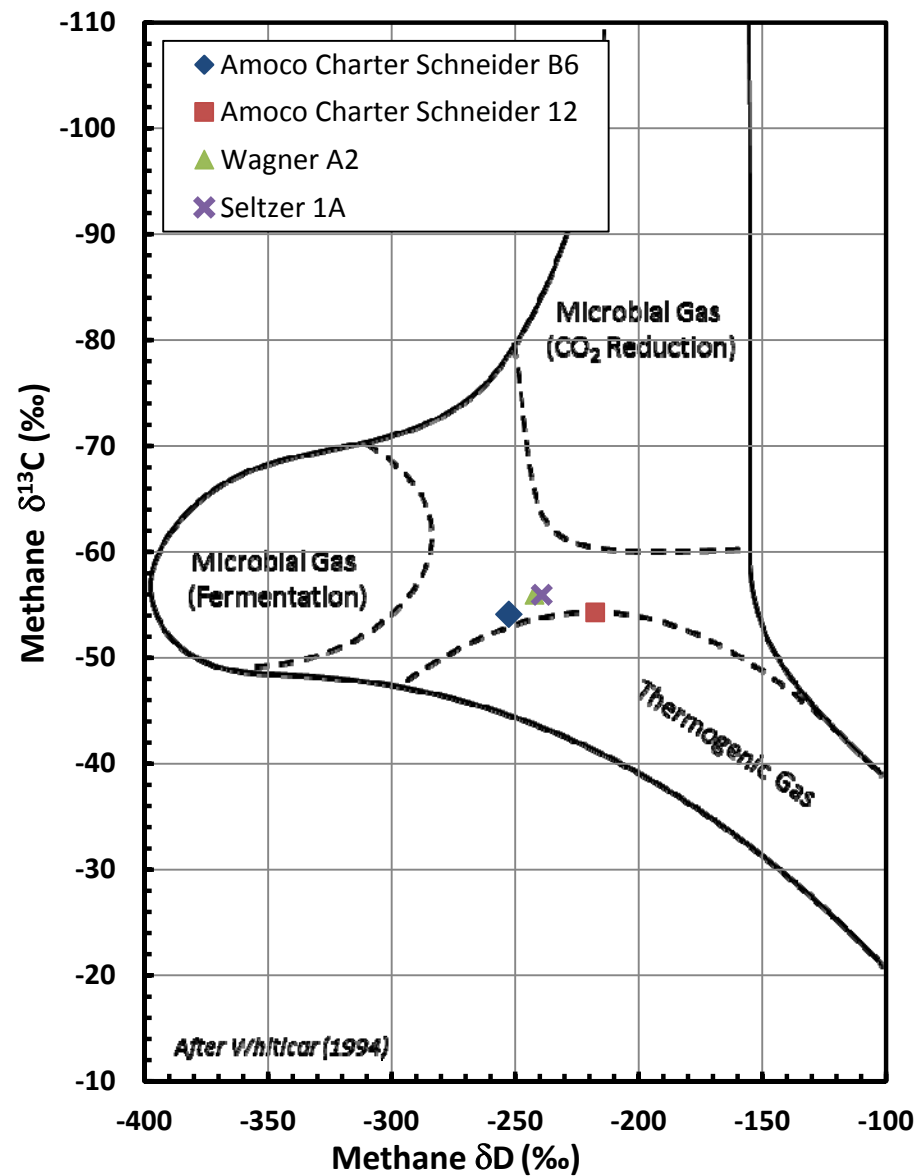


Hydrocarbon Composition Plot



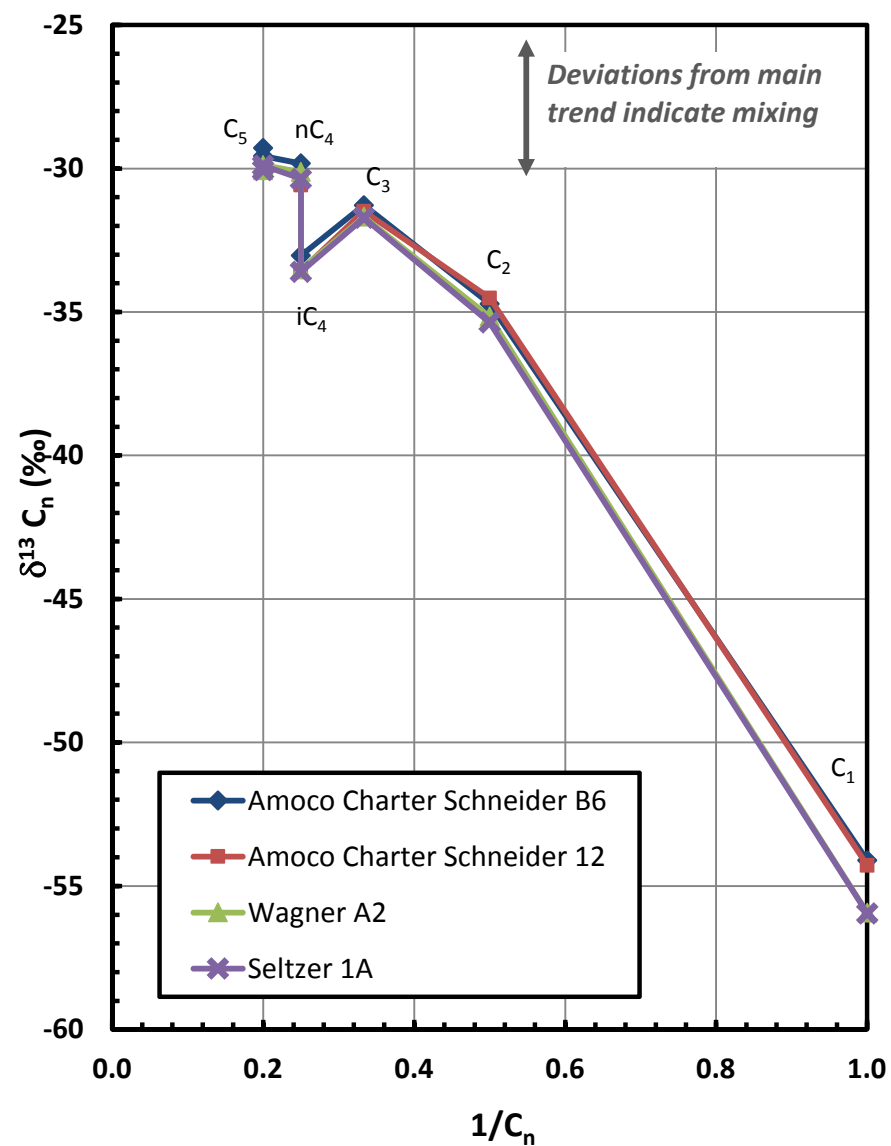
INTERPRETIVE PLOTS

Methane $\delta^{13}\text{C}$ vs δD Genetic Classification Plot



INTERPRETIVE PLOTS

Mixing Plot



Maturity Plot

