

Lab #: 260352 Job #: 18979
 Sample Name: 171 - 0014 Co. Lab#:
 Company: Department of Natural Resources
 Date Sampled: 8/08/2012
 Container: Cali-5-Bond Bag
 Field/Site Name: Bayou Corne Natural Gas Seep
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 8/16/2012 Date Reported: 9/06/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	0.0042			
Hydrogen -----	nd			
Argon -----	0.116			
Oxygen -----	0.71			
Nitrogen -----	6.35			
Carbon Dioxide -----	1.74			
Methane -----	88.28	-43.90	-157.9	
Ethane -----	2.09	-26.52		
Ethylene -----	nd			
Propane -----	0.504	-22.78		
Propylene -----	nd			
Iso-butane -----	0.111	-23.43		
N-butane -----	0.0602	-21.50		
Iso-pentane -----	0.0173			
N-pentane -----	0.0071			
Hexanes + -----	0.0113			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 952				
Specific gravity, calculated: 0.620				

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 260353 Job #: 18979
 Sample Name: 171 - 0012 Co. Lab#:
 Company: Department of Natural Resources
 Date Sampled: 8/08/2012
 Container: Cali-5-Bond Bag
 Field/Site Name: Bayou Corne Natural Gas Seep
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 8/16/2012 Date Reported: 9/06/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	0.0050			
Hydrogen -----	nd			
Argon -----	0.120			
Oxygen -----	0.50			
Nitrogen -----	6.07			
Carbon Dioxide -----	2.07			
Methane -----	89.88	-53.95	-182.6	
Ethane -----	1.02	-26.21		
Ethylene -----	nd			
Propane -----	0.221	-22.83		
Propylene -----	nd			
Iso-butane -----	0.0539			
N-butane -----	0.0296			
Iso-pentane -----	0.0121			
N-pentane -----	0.0052			
Hexanes + -----	0.0085			
Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 939				
Specific gravity, calculated: 0.612				

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 260354 Job #: 18979
 Sample Name: 171 - 0010 Co. Lab#:
 Company: Department of Natural Resources
 Date Sampled: 8/08/2012
 Container: Cali-5-Bond Bag
 Field/Site Name: Bayou Corne Natural Gas Seep
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 8/16/2012 Date Reported: 9/06/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	0.0038			
Hydrogen -----	nd			
Argon -----	0.111			
Oxygen -----	0.52			
Nitrogen -----	6.52			
Carbon Dioxide -----	2.43			
Methane -----	89.91	-55.23	-196.1	
Ethane -----	0.385	-25.88		
Ethylene -----	nd			
Propane -----	0.0760			
Propylene -----	nd			
Iso-butane -----	0.0211			
N-butane -----	0.0112			
Iso-pentane -----	0.0050			
N-pentane -----	0.0016			
Hexanes + -----	0.0020			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 922
 Specific gravity, calculated: 0.611

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 260355 Job #: 18979
 Sample Name: 171 - 0006 Co. Lab#:
 Company: Department of Natural Resources
 Date Sampled: 8/08/2012
 Container: Cali-5-Bond Bag
 Field/Site Name: Bayou Corne Natural Gas Seep
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 8/16/2012 Date Reported: 9/06/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	0.0034			
Hydrogen -----	nd			
Argon -----	0.0953			
Oxygen -----	0.23			
Nitrogen -----	4.66			
Carbon Dioxide -----	2.81			
Methane -----	89.42	-41.99	-156.1	
Ethane -----	2.10	-26.14		
Ethylene -----	nd			
Propane -----	0.417	-23.68		
Propylene -----	nd			
Iso-butane -----	0.101	-24.00		
N-butane -----	0.0847	-23.35		
Iso-pentane -----	0.0396			
N-pentane -----	0.0179			
Hexanes + -----	0.0239			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 964
 Specific gravity, calculated: 0.621

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 260356 Job #: 18979
 Sample Name: 468 - 0008 Co. Lab#:
 Company: Department of Natural Resources
 Date Sampled: 8/09/2012
 Container: Cali-5-Bond Bag
 Field/Site Name: Bayou Corne Natural Gas Seep
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 8/16/2012 Date Reported: 9/06/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	0.0041			
Hydrogen -----	nd			
Argon -----	0.0323			
Oxygen -----	0.21			
Nitrogen -----	2.39			
Carbon Dioxide -----	0.88			
Methane -----	92.79	-42.33	-153.8	
Ethane -----	2.61	-26.86		
Ethylene -----	nd			
Propane -----	0.737	-22.89		
Propylene -----	nd			
Iso-butane -----	0.190	-23.69		
N-butane -----	0.109	-20.88		
Iso-pentane -----	0.0302			
N-pentane -----	0.0079			
Hexanes + -----	0.0065			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1018
 Specific gravity, calculated: 0.599

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 260357 Job #: 18979
 Sample Name: 468 - 0004 Co. Lab#:
 Company: Department of Natural Resources
 Date Sampled: 8/10/2012
 Container: Cali-5-Bond Bag
 Field/Site Name: Bayou Corne Natural Gas Seep
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 8/16/2012 Date Reported: 9/06/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	0.0060			
Hydrogen -----	0.0010			
Argon -----	0.0091			
Oxygen -----	0.16			
Nitrogen -----	0.84			
Carbon Dioxide -----	0.97			
Methane -----	96.19	-47.77	-171.3	
Ethane -----	1.47	-28.36		
Ethylene -----	nd			
Propane -----	0.208	-25.79		
Propylene -----	nd			
Iso-butane -----	0.0501			
N-butane -----	0.0467			
Iso-pentane -----	0.0190			
N-pentane -----	0.0122			
Hexanes + -----	0.0189			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1012
 Specific gravity, calculated: 0.579

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 260358 Job #: 18979
 Sample Name: 468 - 0002 Co. Lab#:
 Company: Department of Natural Resources
 Date Sampled: 8/10/2012
 Container: Cali-5-Bond Bag
 Field/Site Name: Bayou Corne Natural Gas Seep
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 8/16/2012 Date Reported: 9/06/2012

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	0.0024			
Hydrogen -----	0.0030			
Argon -----	nd			
Oxygen -----	0.057			
Nitrogen -----	0.33			
Carbon Dioxide -----	1.18			
Methane -----	97.54	-39.21	-157.0	
Ethane -----	0.755	-29.44		
Ethylene -----	nd			
Propane -----	0.0834	-26.06		
Propylene -----	nd			
Iso-butane -----	0.0154			
N-butane -----	0.0151			
Iso-pentane -----	0.0056			
N-pentane -----	0.0035			
Hexanes + -----	0.0059			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1006
 Specific gravity, calculated: 0.572

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.