

Lab #: 218735

Job #: 16094

Sample Name: HSR-Vadney 6-34

Co. Lab#:

Company: LT Environmental

Date Sampled: 8/23/2011

Container: IsoTube®

API 05-123-16878

Field/Site Name: PO 014211159

Location:

Formation/Depth:

Sampling Point:

Date Received: 8/25/2011

Date Reported: 9/16/2011

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	na			
Helium -----	0.0089			
Hydrogen -----	0.0022			
Argon -----	nd			
Oxygen -----	0.007			
Nitrogen -----	0.31			
Carbon Dioxide -----	2.75			
Methane -----	73.62	-46.61	-230.3	
Ethane -----	13.71	-30.54		
Ethylene -----	nd			
Propane -----	5.66	-27.49		
Iso-butane -----	0.914			
N-butane -----	1.90			
Iso-pentane -----	0.491			
N-pentane -----	0.486			
Hexanes + -----	0.144			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 1274

Specific gravity, calculated: 0.766

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