

Lab #: 822985 Job #: 50534 IS-65777 Co. Job#:   
 Sample Name: CS-4.5 Co. Lab#:   
 Company: EERC - Energy & Environmental Research   
 API/Well:   
 Container: IsoBag   
 Field/Site Name: CSND   
 Location: Center, ND   
 Formation/Depth:   
 Sampling Point:   
 Date Sampled: 3/21/2022 14:00 Date Received: 3/29/2022 Date Reported: 5/02/2022

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$^{14}\text{C}$ conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	0.980				
Oxygen -----	19.49				
Nitrogen -----	78.90				
Carbon Dioxide -----	0.63	-18.90		42.8 $\pm$ 0.2	
Methane -----	nd				
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Propylene -----	nd				
Iso-butane -----	nd				
N-butane -----	nd				
Iso-pentane -----	nd				
N-pentane -----	nd				
Hexanes + -----	nd				

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0

Specific gravity, calculated: 1.002

Remarks:

Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 822986 Job #: 50534 IS-65777 Co. Job#:   
 Sample Name: CS-9 Co. Lab#:   
 Company: EERC - Energy & Environmental Research   
 API/Well:   
 Container: IsoBag   
 Field/Site Name: CSND   
 Location: Center, ND   
 Formation/Depth:   
 Sampling Point:   
 Date Sampled: 3/21/2022 13:00 Date Received: 3/29/2022 Date Reported: 5/02/2022

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$^{14}\text{C}$ conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	1.00				
Oxygen -----	4.19				
Nitrogen -----	85.96				
Carbon Dioxide -----	8.85	-18.41		8.7 ± 0.1	
Methane -----	0.0024				
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Propylene -----	nd				
Iso-butane -----	nd				
N-butane -----	nd				
Iso-pentane -----	nd				
N-pentane -----	nd				
Hexanes + -----	nd				

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0

Specific gravity, calculated: 1.026

#### Remarks:

Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 822987 Job #: 50534 IS-65777 Co. Job#:   
 Sample Name: CS-15 Co. Lab#:   
 Company: EERC - Energy & Environmental Research   
 API/Well:   
 Container: IsoBag   
 Field/Site Name: CSND   
 Location: Center, ND   
 Formation/Depth:   
 Sampling Point:   
 Date Sampled: 3/21/2022 12:00 Date Received: 3/29/2022 Date Reported: 5/02/2022

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$^{14}\text{C}$ conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	1.02				
Oxygen -----	0.83				
Nitrogen -----	87.73				
Carbon Dioxide -----	10.42	-18.39		9.3 ± 0.1	
Methane -----	0.0036				
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Propylene -----	nd				
Iso-butane -----	nd				
N-butane -----	nd				
Iso-pentane -----	nd				
N-pentane -----	nd				
Hexanes + -----	0.0004				

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0

Specific gravity, calculated: 1.030

Remarks:

Insufficient methane concentration for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.