

Lab #: 872919 Job #: 54766 IS-65777 Co. Job#:
 Sample Name: CS-4 Co. Lab#:
 Company: University of North Dakota - Energy & Environmental Resea
 API/Well:
 Container: IsoBag
 Field/Site Name: Project #25411 (CSND)
 Location: MRY
 Formation/Depth:
 Sampling Point:
 Date Sampled: 5/16/2023 14:30 Date Received: 5/22/2023 Date Reported: 6/13/2023

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	^{14}C conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	0.982				
Oxygen -----	19.91				
Nitrogen -----	78.00				
Carbon Dioxide -----	1.10	-17.04		51.2 \pm 0.2	
Methane -----	0.0017				
Ethane -----	0.0003				
Ethylene -----	nd				
Propane -----	0.0002				
Propylene -----	nd				
Iso-butane -----	nd				
N-butane -----	0.0002				
Iso-pentane -----	nd				
N-pentane -----	0.0001				
Hexanes + -----	0.0013				

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

Specific gravity, calculated: 1.005

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 #: 872920 Job #: 54766 IS-65777 Co. Job#:
 Sample Name: CS-9 Co. Lab#:
 Company: University of North Dakota - Energy & Environmental Resea
 API/Well:
 Container: IsoBag
 Field/Site Name: Project #25411 (CSND)
 Location: MRY
 Formation/Depth:
 Sampling Point:
 Date Sampled: 5/16/2023 15:00 Date Received: 5/22/2023 Date Reported: 6/13/2023

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	^{14}C conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	1.05				
Oxygen -----	1.30				
Nitrogen -----	88.18				
Carbon Dioxide -----	9.47	-18.56		8.0 ± 0.1	
Methane -----	0.0007				
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Propylene -----	nd				
Iso-butane -----	nd				
N-butane -----	nd				
Iso-pentane -----	nd				
N-pentane -----	nd				
Hexanes + -----	0.0001				

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

Specific gravity, calculated: 1.026

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 #: 872921 Job #: 54766 IS-65777 Co. Job#:
 Sample Name: CS-15 Co. Lab#:
 Company: University of North Dakota - Energy & Environmental Resea
 API/Well:
 Container: IsoBag
 Field/Site Name: Project #25411 (CSND)
 Location: MRY
 Formation/Depth:
 Sampling Point:
 Date Sampled: 5/16/2023 16:00 Date Received: 5/22/2023 Date Reported: 6/13/2023

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	^{14}C conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	1.05				
Oxygen -----	1.24				
Nitrogen -----	87.97				
Carbon Dioxide -----	9.74	-18.25		7.3 ± 0.1	
Methane -----	0.0008				
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Propylene -----	nd				
Iso-butane -----	nd				
N-butane -----	nd				
Iso-pentane -----	nd				
N-pentane -----	nd				
Hexanes + -----	0.0002				

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

Specific gravity, calculated: 1.027

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. %.