

Lab #: 770877 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: North Rinn 0-6-9 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 424116   
 Date Sampled: 9/03/2020 10:40 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0258			
Hydrogen -----	0.0292			
Argon -----	0.0687			
Oxygen -----	1.34			
Nitrogen -----	5.30			
Carbon Dioxide -----	0.011			
Methane -----	81.01	-51.5	-256	
Ethane -----	6.91	-34.8		
Ethylene -----	nd			
Propane -----	3.12	-30.1		
Propylene -----	nd			
Iso-butane -----	0.431	-32.0		
N-butane -----	1.05	-29.0		
Iso-pentane -----	0.296	-28.5		
N-pentane -----	0.264	-28.4		
Hexanes + -----	0.143			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1102

Specific gravity, calculated: 0.683

Remarks: W73579

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 #: 770878 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Ione 34-2 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 262332   
 Date Sampled: 9/08/2020 8:45 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.930			
Oxygen -----	21.04			
Nitrogen -----	77.94			
Carbon Dioxide -----	0.090	-11.6		
Methane -----	0.0007			
Ethane -----	nd			
Ethylene -----	nd			
Propane -----	nd			
Propylene -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0021			

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

Specific gravity, calculated: 1.001

Remarks: W762437

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 #: 770879 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Ione 6-4-4 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 417111   
 Date Sampled: 9/08/2020 10:18 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.940			
Oxygen -----	20.88			
Nitrogen -----	78.09			
Carbon Dioxide -----	0.089	-11.4		
Methane -----	0.0003			
Ethane -----	nd			
Ethylene -----	nd			
Propane -----	nd			
Propylene -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0008			

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

Specific gravity, calculated: 1.000

Remarks: W58486

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 #: 770880 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Ione 6-0-2 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 414627   
 Date Sampled: 9/08/2020 9:20 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0052			
Hydrogen -----	nd			
Argon -----	0.944			
Oxygen -----	20.51			
Nitrogen -----	78.44			
Carbon Dioxide -----	0.082	-12.8		
Methane -----	0.0198			
Ethane -----	0.0016			
Ethylene -----	nd			
Propane -----	0.0006			
Propylene -----	nd			
Iso-butane -----	nd			
N-butane -----	0.0002			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0004			

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

Specific gravity, calculated: 1.000

Remarks: W58480

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 #: 770881 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: North Rinn 0-4-9 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 424118   
 Date Sampled: 9/03/2020 10:40 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.932			
Oxygen -----	21.21			
Nitrogen -----	76.81			
Carbon Dioxide -----	0.087	-11.2		
Methane -----	0.803	-50.1	-246	
Ethane -----	0.0987	-32.9		
Ethylene -----	nd			
Propane -----	0.0318	-28.9		
Propylene -----	nd			
Iso-butane -----	0.0044			
N-butane -----	0.0113	-28.5		
Iso-pentane -----	0.0042			
N-pentane -----	0.0036			
Hexanes + -----	0.0019			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 12

Specific gravity, calculated: 0.998

Remarks: W73578

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 #: 770882 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Ione 31-10 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 262876   
 Date Sampled: 9/08/2020 7:30 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0228			
Hydrogen -----	0.0303			
Argon -----	0.0229			
Oxygen -----	1.20			
Nitrogen -----	7.10			
Carbon Dioxide -----	0.037			
Methane -----	76.88	-51.9	-248	
Ethane -----	8.26	-35.1		
Ethylene -----	nd			
Propane -----	4.49	-30.5		
Propylene -----	nd			
Iso-butane -----	0.529	-32.0		
N-butane -----	0.983	-29.4		
Iso-pentane -----	0.183	-28.6		
N-pentane -----	0.151	-28.7		
Hexanes + -----	0.115			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1109

Specific gravity, calculated: 0.705

Remarks: W762400

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 #: 770883 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Deason 32-35 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 282854   
 Date Sampled: 9/02/2020 11:27 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0491			
Hydrogen -----	nd			
Argon -----	0.0802			
Oxygen -----	1.58			
Nitrogen -----	6.61			
Carbon Dioxide -----	0.012			
Methane -----	76.17	-53.6	-240	
Ethane -----	7.97	-33.9		
Ethylene -----	nd			
Propane -----	4.91	-30.3		
Propylene -----	nd			
Iso-butane -----	0.629	-31.9		
N-butane -----	1.31	-29.3		
Iso-pentane -----	0.280	-28.5		
N-pentane -----	0.268	-28.3		
Hexanes + -----	0.134			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1131

Specific gravity, calculated: 0.719

Remarks: W29101

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 #: 770884 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: State Peterson 21-20 Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 275088   
 Date Sampled: 9/08/2020 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.899			
Oxygen -----	19.30			
Nitrogen -----	73.62			
Carbon Dioxide -----	0.24	-2.7		
Methane -----	4.87	-47.2	-245	
Ethane -----	0.677	-32.6		
Ethylene -----	nd			
Propane -----	0.279	-29.5		
Propylene -----	nd			
Iso-butane -----	0.0291	-31.1		
N-butane -----	0.0657	-28.4		
Iso-pentane -----	0.0095			
N-pentane -----	0.0102	-27.5		
Hexanes + -----	0.0026			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 72

Specific gravity, calculated: 0.982

Remarks: 16192833.1

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 #: 770885 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: State Peterson 21-20 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 275088   
 Date Sampled: 9/08/2020 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.923			
Oxygen -----	21.14			
Nitrogen -----	77.85			
Carbon Dioxide -----	0.088	-11.5		
Methane -----	0.0013			
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: 1.001

Remarks: 16192833.1

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 #: 770886 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: North Rinn 13-9 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 424117   
 Date Sampled: 9/03/2020 10:40 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0154			
Hydrogen -----	0.0273			
Argon -----	0.0060			
Oxygen -----	0.12			
Nitrogen -----	0.68			
Carbon Dioxide -----	2.01	2.2		
Methane -----	79.54	-48.5	-227	
Ethane -----	10.73	-30.9		
Ethylene -----	nd			
Propane -----	3.96	-27.3		
Propylene -----	nd			
Iso-butane -----	0.620	-29.8		
N-butane -----	1.27	-27.4		
Iso-pentane -----	0.391	-28.1		
N-pentane -----	0.396	-27.7		
Hexanes + -----	0.235			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1204

Specific gravity, calculated: 0.715

Remarks: W73384

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 #: 770887 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: North Rinn 2-6-9 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 424121   
 Date Sampled: 9/03/2020 10:40 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0135			
Hydrogen -----	0.0154			
Argon -----	0.537			
Oxygen -----	13.46			
Nitrogen -----	47.54			
Carbon Dioxide -----	0.79	1.1		
Methane -----	30.26	-48.5	-230	
Ethane -----	4.29	-31.4		
Ethylene -----	nd			
Propane -----	1.90	-28.6		
Propylene -----	nd			
Iso-butane -----	0.286	-31.0		
N-butane -----	0.629	-28.2		
Iso-pentane -----	0.145	-28.4		
N-pentane -----	0.125	-27.7		
Hexanes + -----	0.0056			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 472

Specific gravity, calculated: 0.894

Remarks: W73580

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 #: 770888 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Deason 4-2-36 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 300653   
 Date Sampled: 9/02/2020 13:13 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.901			
Oxygen -----	19.85			
Nitrogen -----	79.19			
Carbon Dioxide -----	0.063	-11.3		
Methane -----	0.0009			
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: 0.999

Remarks: W71279

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 #: 770889 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Deason 42-35 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 418154   
 Date Sampled: 9/02/2020 12:07 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0500			
Hydrogen -----	0.0626			
Argon -----	0.106			
Oxygen -----	2.04			
Nitrogen -----	8.38			
Carbon Dioxide -----	0.013			
Methane -----	74.14	-54.1	-244	
Ethane -----	7.62	-34.1		
Ethylene -----	nd			
Propane -----	4.92	-30.2		
Propylene -----	nd			
Iso-butane -----	0.624	-32.0		
N-butane -----	1.29	-29.0		
Iso-pentane -----	0.271	-28.6		
N-pentane -----	0.276	-28.1		
Hexanes + -----	0.212			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1107

Specific gravity, calculated: 0.728

Remarks: W59248

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 #: 770890 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Dowdy 6-4-10 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 430086   
 Date Sampled: 9/08/2020 12:11 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0559			
Hydrogen -----	nd			
Argon -----	0.0200			
Oxygen -----	0.26			
Nitrogen -----	3.47			
Carbon Dioxide -----	0.005			
Methane -----	84.16	-56.0	-238	
Ethane -----	4.09	-34.2		
Ethylene -----	nd			
Propane -----	4.71	-31.6		
Propylene -----	nd			
Iso-butane -----	0.996	-32.4		
N-butane -----	1.35	-30.5		
Iso-pentane -----	0.353	-29.1		
N-pentane -----	0.290	-28.9		
Hexanes + -----	0.237			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1160

Specific gravity, calculated: 0.687

Remarks: W71612

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 #: 770891 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: William Peltier 1A-20H Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 422535   
 Date Sampled: 9/03/2020 8:20 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.946			
Oxygen -----	21.13			
Nitrogen -----	77.84			
Carbon Dioxide -----	0.083	-11.8		
Methane -----	0.0010			
Ethane -----	nd			
Ethylene -----	nd			
Propane -----	nd			
Propylene -----	0.0001			
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: 1.001

Remarks: C64715

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 #: 770892 Job #: 45816 IS-94649 Co. Job#:   
 Sample Name: Deason 4-4-36 Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 425281   
 Date Sampled: 9/02/2020 13:05 Date Received: 9/22/2020 Date Reported: 10/27/2020

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0303			
Hydrogen -----	nd			
Argon -----	0.0625			
Oxygen -----	1.20			
Nitrogen -----	4.75			
Carbon Dioxide -----	0.010			
Methane -----	78.31	-52.4	-254	
Ethane -----	8.95	-34.6		
Ethylene -----	nd			
Propane -----	4.57	-30.3		
Propylene -----	nd			
Iso-butane -----	0.507	-31.9		
N-butane -----	1.08	-28.8		
Iso-pentane -----	0.215	-28.6		
N-pentane -----	0.195	-28.1		
Hexanes + -----	0.124			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1144

Specific gravity, calculated: 0.702

Remarks: W71123

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. %.