

Lab #: 796286 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Deason 41-35 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 418153
 Date Sampled: 6/07/2021 11:20 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0509			
Hydrogen -----	0.387			
Argon -----	nd			
Oxygen -----	0.024			
Nitrogen -----	1.40			
Carbon Dioxide -----	0.042			
Methane -----	80.62	-54.2	-244	
Ethane -----	9.14	-34.1		
Ethylene -----	nd			
Propane -----	5.21	-30.4		
Propylene -----	nd			
Iso-butane -----	0.643	-31.8		
N-butane -----	1.49	-28.8		
Iso-pentane -----	0.334	-28.5		
N-pentane -----	0.359	-28.0		
Hexanes + -----	0.298			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1226

Specific gravity, calculated: 0.705

Remarks: W59247 8503

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 #: 796287 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Deason 41-35 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 418153
 Date Sampled: 6/07/2021 11:20 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0454			
Hydrogen -----	0.0191			
Argon -----	0.0078			
Oxygen -----	0.027			
Nitrogen -----	1.82			
Carbon Dioxide -----	nd			
Methane -----	81.10	-53.8	-242	
Ethane -----	9.04	-34.3		
Ethylene -----	nd			
Propane -----	5.19	-30.4		
Propylene -----	nd			
Iso-butane -----	0.636	-31.8		
N-butane -----	1.39	-28.8		
Iso-pentane -----	0.280	-28.6		
N-pentane -----	0.281	-28.3		
Hexanes + -----	0.160			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1212

Specific gravity, calculated: 0.700

Remarks: W59247 8503

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 #: 796288 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Ione 31-10 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 262876
 Date Sampled: 6/08/2021 7:45 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0139			
Hydrogen -----	0.0331			
Argon -----	nd			
Oxygen -----	0.023			
Nitrogen -----	0.54			
Carbon Dioxide -----	2.01	2.3		
Methane -----	75.51	-50.0	-242	
Ethane -----	11.81	-33.0		
Ethylene -----	0.0001			
Propane -----	5.87	-29.3		
Propylene -----	nd			
Iso-butane -----	0.855	-31.4		
N-butane -----	2.03	-28.2		
Iso-pentane -----	0.557	-28.4		
N-pentane -----	0.589	-27.7		
Hexanes + -----	0.154			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1274

Specific gravity, calculated: 0.757

Remarks: W762400 8503

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 #: 796289 Job #: 48072 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: 6/08/2021 7:45 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0268			
Hydrogen -----	nd			
Argon -----	nd			
Oxygen -----	0.019			
Nitrogen -----	1.13			
Carbon Dioxide -----	0.011			
Methane -----	85.48	-52.2	-250	
Ethane -----	7.94	-35.5		
Ethylene -----	nd			
Propane -----	3.68	-30.8		
Propylene -----	nd			
Iso-butane -----	0.397	-32.2		
N-butane -----	0.766	-29.2		
Iso-pentane -----	0.163	-28.7		
N-pentane -----	0.139	-28.7		
Hexanes + -----	0.250			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1164

Specific gravity, calculated: 0.662

Remarks: W762400 8503

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 #: 796290 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Ione 34-10 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 262191
 Date Sampled: 6/04/2021 10:00 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0090			
Hydrogen -----	0.110			
Argon -----	nd			
Oxygen -----	0.032			
Nitrogen -----	0.38			
Carbon Dioxide -----	2.70	3.9		
Methane -----	71.24	-49.3	-241	
Ethane -----	13.90	-32.3		
Ethylene -----	nd			
Propane -----	6.30	-28.7		
Propylene -----	nd			
Iso-butane -----	0.958	-31.3		
N-butane -----	2.36	-27.6		
Iso-pentane -----	0.656	-28.3		
N-pentane -----	0.755	-27.7		
Hexanes + -----	0.602			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1326

Specific gravity, calculated: 0.800

Remarks: W762423 8503

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 #: 796291 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Ione 34-10 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 262191
 Date Sampled: 6/04/2021 10:00 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0307			
Hydrogen -----	nd			
Argon -----	0.0051			
Oxygen -----	0.024			
Nitrogen -----	1.15			
Carbon Dioxide -----	0.025			
Methane -----	87.81	-51.6	-243	
Ethane -----	5.82	-35.2		
Ethylene -----	nd			
Propane -----	2.79	-30.7		
Propylene -----	nd			
Iso-butane -----	0.390	-32.3		
N-butane -----	0.801	-29.4		
Iso-pentane -----	0.275	-29.0		
N-pentane -----	0.274	-28.7		
Hexanes + -----	0.607			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1155

Specific gravity, calculated: 0.657

Remarks: W762423 8503

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 #: 796292 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Kennedy 8-0-21 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 418859
 Date Sampled: 6/03/2021 14:00 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0202			
Hydrogen -----	0.0398			
Argon -----	nd			
Oxygen -----	0.023			
Nitrogen -----	0.64			
Carbon Dioxide -----	1.71	2.5		
Methane -----	78.41	-49.1	-231	
Ethane -----	11.19	-31.9		
Ethylene -----	0.0018			
Propane -----	4.64	-28.9		
Propylene -----	0.0001			
Iso-butane -----	0.669	-31.4		
N-butane -----	1.88	-28.3		
Iso-pentane -----	0.446	-28.5		
N-pentane -----	0.301	-27.3		
Hexanes + -----	0.0243			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1228

Specific gravity, calculated: 0.724

Remarks: W62419 8503

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 #: 796293 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Kennedy 8-0-21 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 418859
 Date Sampled: 6/03/2021 14:00 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0767			
Hydrogen -----	nd			
Argon -----	0.0128			
Oxygen -----	0.030			
Nitrogen -----	3.35			
Carbon Dioxide -----	nd			
Methane -----	84.22	-56.5	-238	
Ethane -----	5.31	-34.5		
Ethylene -----	nd			
Propane -----	4.13	-31.5		
Propylene -----	nd			
Iso-butane -----	0.814	-32.5		
N-butane -----	1.24	-30.4		
Iso-pentane -----	0.333	-28.9		
N-pentane -----	0.272	-29.1		
Hexanes + -----	0.207			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1155

Specific gravity, calculated: 0.680

Remarks: W62419 8503

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 #: 796294 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Lumry 31-24 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 333
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0096			
Hydrogen -----	0.135			
Argon -----	nd			
Oxygen -----	0.038			
Nitrogen -----	0.39			
Carbon Dioxide -----	1.37	1.3		
Methane -----	72.99	-48.7	-236	
Ethane -----	12.95	-31.2		
Ethylene -----	0.0002			
Propane -----	6.28	-28.1		
Propylene -----	nd			
Iso-butane -----	1.08	-30.9		
N-butane -----	2.83	-27.3		
Iso-pentane -----	0.845	-27.9		
N-pentane -----	0.892	-27.0		
Hexanes + -----	0.193			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1339

Specific gravity, calculated: 0.787

Remarks: W43433 8503

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 #: 796295 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Lumry 31-24 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 333
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0532			
Hydrogen -----	0.0133			
Argon -----	0.0113			
Oxygen -----	0.032			
Nitrogen -----	2.35			
Carbon Dioxide -----	nd			
Methane -----	86.00	-55.8	-230	
Ethane -----	5.66	-33.3		
Ethylene -----	nd			
Propane -----	3.44	-29.9		
Propylene -----	nd			
Iso-butane -----	0.537	-31.6		
N-butane -----	1.06	-28.6		
Iso-pentane -----	0.282	-28.6		
N-pentane -----	0.255	-28.0		
Hexanes + -----	0.310			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1149

Specific gravity, calculated: 0.666

Remarks: W43433 8503

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 #: 796296 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Lumry 6-4-24 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 332
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0122			
Hydrogen -----	0.218			
Argon -----	nd			
Oxygen -----	0.035			
Nitrogen -----	0.41			
Carbon Dioxide -----	0.91	-1.7		
Methane -----	77.42	-48.3	-229	
Ethane -----	11.30	-31.0		
Ethylene -----	0.0006			
Propane -----	4.86	-27.6		
Propylene -----	nd			
Iso-butane -----	0.817	-30.5		
N-butane -----	2.07	-27.4		
Iso-pentane -----	0.719	-28.3		
N-pentane -----	0.817	-27.4		
Hexanes + -----	0.415			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1288

Specific gravity, calculated: 0.747

Remarks: W43462 8503

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 #: 796297 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Lumry 6-4-24 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 332
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0693			
Hydrogen -----	nd			
Argon -----	0.0146			
Oxygen -----	0.035			
Nitrogen -----	2.58			
Carbon Dioxide -----	nd			
Methane -----	86.32	-57.0	-226	
Ethane -----	5.65	-32.8		
Ethylene -----	nd			
Propane -----	3.47	-29.5		
Propylene -----	0.0002			
Iso-butane -----	0.503	-31.5		
N-butane -----	0.770	-28.5		
Iso-pentane -----	0.181	-28.4		
N-pentane -----	0.141	-28.0		
Hexanes + -----	0.262			

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

Specific gravity, calculated: 0.657

Remarks: W43462 8503

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 #: 796298 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Regnier Farms 1B-19H / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 451043
 Date Sampled: 5/18/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0134			
Hydrogen -----	0.212			
Argon -----	nd			
Oxygen -----	0.022			
Nitrogen -----	0.54			
Carbon Dioxide -----	0.12	-3.7		
Methane -----	80.54	-49.8	-243	
Ethane -----	11.60	-33.1		
Ethylene -----	0.0006			
Propane -----	4.32	-29.1		
Propylene -----	nd			
Iso-butane -----	0.555	-31.5		
N-butane -----	1.18	-27.9		
Iso-pentane -----	0.281	-28.6		
N-pentane -----	0.277	-27.7		
Hexanes + -----	0.340			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1230

Specific gravity, calculated: 0.699

Remarks: C82442 8503

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 #: 796299 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Regnier Farms 1B-19H / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 451043
 Date Sampled: 5/18/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	42.32			
Argon -----	0.605			
Oxygen -----	0.21			
Nitrogen -----	55.47			
Carbon Dioxide -----	0.005			
Methane -----	0.978	-48.9	-249	
Ethane -----	0.0333	-31.9		
Ethylene -----	0.0002			
Propane -----	0.0070			
Propylene -----	0.0013			
Iso-butane -----	0.0019			
N-butane -----	0.0074			
Iso-pentane -----	0.0053			
N-pentane -----	0.0091			
Hexanes + -----	0.346			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 166

Specific gravity, calculated: 0.593

Remarks: C82442 8503

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 #: 796300 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Regnier Farms 1C-19H / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 451033
 Date Sampled: 6/02/2021 10:52 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0150			
Hydrogen -----	0.189			
Argon -----	0.0056			
Oxygen -----	0.018			
Nitrogen -----	5.16			
Carbon Dioxide -----	0.16	-3.9		
Methane -----	75.73	-50.1	-247	
Ethane -----	11.21	-33.3		
Ethylene -----	0.0006			
Propane -----	4.47	-29.6		
Propylene -----	0.0001			
Iso-butane -----	0.593	-31.5		
N-butane -----	1.33	-28.1		
Iso-pentane -----	0.314	-28.4		
N-pentane -----	0.348	-27.7		
Hexanes + -----	0.455			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1193

Specific gravity, calculated: 0.725

Remarks: C82443 8503

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 #: 796301 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Regnier Farms 1C-19H / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 451033
 Date Sampled: 6/02/2021 10:52 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0265			
Hydrogen -----	3.56			
Argon -----	0.0328			
Oxygen -----	0.17			
Nitrogen -----	3.07			
Carbon Dioxide -----	nd			
Methane -----	90.08	-49.7	-244	
Ethane -----	2.09	-31.2		
Ethylene -----	nd			
Propane -----	0.0582	-27.4		
Propylene -----	0.0001			
Iso-butane -----	0.0342	-31.7		
N-butane -----	0.208	-28.6		
Iso-pentane -----	0.156	-28.8		
N-pentane -----	0.207	-28.3		
Hexanes + -----	0.311			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1001

Specific gravity, calculated: 0.579

Remarks: C82443 8503

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 #: 796302 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Regnier Farms 1D-19H / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 451037
 Date Sampled: 5/18/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0124			
Hydrogen -----	0.153			
Argon -----	0.266			
Oxygen -----	5.94			
Nitrogen -----	30.45			
Carbon Dioxide -----	0.12	-8.0		
Methane -----	51.53	-50.4	-249	
Ethane -----	6.88	-33.5		
Ethylene -----	0.0007			
Propane -----	2.59	-29.1		
Propylene -----	nd			
Iso-butane -----	0.324	-31.4		
N-butane -----	0.715	-28.1		
Iso-pentane -----	0.164	-28.9		
N-pentane -----	0.184	-28.1		
Hexanes + -----	0.671			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 791

Specific gravity, calculated: 0.812

Remarks: C82444 8503

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 #: 796303 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Regnier Farms 1D-19H / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 451037
 Date Sampled: 5/18/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	73.33			
Argon -----	0.0891			
Oxygen -----	0.036			
Nitrogen -----	6.32			
Carbon Dioxide -----	nd			
Methane -----	17.89	-46.9	-244	
Ethane -----	1.59	-32.7		
Ethylene -----	0.0001			
Propane -----	0.469	-29.1		
Propylene -----	nd			
Iso-butane -----	0.0524	-31.6		
N-butane -----	0.119	-28.3		
Iso-pentane -----	0.0270	-28.3		
N-pentane -----	0.0321	-28.2		
Hexanes + -----	0.0495			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 470

Specific gravity, calculated: 0.243

Remarks: C82444 8503

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 #: 796304 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Regnier Farms 1G-19H / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 451036
 Date Sampled: 5/18/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0140			
Hydrogen -----	0.362			
Argon -----	0.0100			
Oxygen -----	0.027			
Nitrogen -----	14.72			
Carbon Dioxide -----	0.26	-4.2		
Methane -----	66.86	-50.3	-247	
Ethane -----	10.85	-33.3		
Ethylene -----	0.0007			
Propane -----	4.33	-29.0		
Propylene -----	nd			
Iso-butane -----	0.556	-31.6		
N-butane -----	1.20	-28.2		
Iso-pentane -----	0.265	-28.4		
N-pentane -----	0.287	-27.9		
Hexanes + -----	0.256			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1074

Specific gravity, calculated: 0.753

Remarks: C82447 8503

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 #: 796305 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Salisbury 14-11 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 418470
 Date Sampled: 6/02/2021 13:07 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0205			
Hydrogen -----	nd			
Argon -----	nd			
Oxygen -----	0.034			
Nitrogen -----	0.53			
Carbon Dioxide -----	2.63	2.7		
Methane -----	80.86	-48.4	-222	
Ethane -----	10.38	-30.2		
Ethylene -----	0.0001			
Propane -----	3.33	-26.1		
Propylene -----	nd			
Iso-butane -----	0.525	-28.7		
N-butane -----	0.801	-26.2		
Iso-pentane -----	0.317	-27.7		
N-pentane -----	0.260	-27.1		
Hexanes + -----	0.313			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1171

Specific gravity, calculated: 0.702

Remarks: W65712 8503

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 #: 796306 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Salisbury 14-11 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 418470
 Date Sampled: 6/02/2021 13:00 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0398			
Hydrogen -----	nd			
Argon -----	0.0055			
Oxygen -----	0.030			
Nitrogen -----	1.17			
Carbon Dioxide -----	nd			
Methane -----	81.97	-53.1	-254	
Ethane -----	8.70	-36.1		
Ethylene -----	nd			
Propane -----	5.22	-30.5		
Propylene -----	nd			
Iso-butane -----	0.647	-32.1		
N-butane -----	1.38	-28.6		
Iso-pentane -----	0.293	-28.4		
N-pentane -----	0.250	-28.3		
Hexanes + -----	0.292			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1221

Specific gravity, calculated: 0.699

Remarks: W65712 8503

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 #: 796307 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Wandell 4-4-7 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 419096
 Date Sampled: 6/02/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0106			
Hydrogen -----	0.0470			
Argon -----	nd			
Oxygen -----	0.031			
Nitrogen -----	0.52			
Carbon Dioxide -----	1.42	3.2		
Methane -----	76.71	-49.5	-253	
Ethane -----	13.24	-33.5		
Ethylene -----	0.0003			
Propane -----	5.30	-29.4		
Propylene -----	nd			
Iso-butane -----	0.598	-31.7		
N-butane -----	1.42	-28.5		
Iso-pentane -----	0.268	-28.5		
N-pentane -----	0.275	-28.4		
Hexanes + -----	0.161			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1245

Specific gravity, calculated: 0.729

Remarks: W65672 8503

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 #: 796308 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Wandell 4-4-7 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 419096
 Date Sampled: 6/02/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0358			
Hydrogen -----	nd			
Argon -----	0.0103			
Oxygen -----	0.038			
Nitrogen -----	1.67			
Carbon Dioxide -----	nd			
Methane -----	80.91	-52.9	-251	
Ethane -----	9.65	-33.9		
Ethylene -----	0.0005			
Propane -----	4.75	-29.5		
Propylene -----	0.0003			
Iso-butane -----	0.638	-31.9		
N-butane -----	1.37	-28.5		
Iso-pentane -----	0.346	-28.6		
N-pentane -----	0.328	-28.2		
Hexanes + -----	0.249			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1218

Specific gravity, calculated: 0.702

Remarks: W65672 8503

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 #: 796309 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Wiggett 4-2-13 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 64
 Date Sampled: 6/03/2021 11:30 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0159			
Hydrogen -----	nd			
Argon -----	nd			
Oxygen -----	0.027			
Nitrogen -----	0.40			
Carbon Dioxide -----	3.03	3.5		
Methane -----	82.55	-47.1	-214	
Ethane -----	9.01	-28.9		
Ethylene -----	nd			
Propane -----	2.65	-26.0		
Propylene -----	nd			
Iso-butane -----	0.469	-28.1		
N-butane -----	0.774	-26.7		
Iso-pentane -----	0.309	-27.6		
N-pentane -----	0.300	-27.4		
Hexanes + -----	0.464			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1153

Specific gravity, calculated: 0.695

Remarks: W43139 8503

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 #: 796310 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Wiggett 4-2-13 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 64
 Date Sampled: 6/03/2021 11:30 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0543			
Hydrogen -----	nd			
Argon -----	0.0104			
Oxygen -----	0.030			
Nitrogen -----	2.19			
Carbon Dioxide -----	nd			
Methane -----	84.38	-55.3	-237	
Ethane -----	6.24	-35.0		
Ethylene -----	nd			
Propane -----	4.71	-30.1		
Propylene -----	nd			
Iso-butane -----	0.688	-32.1		
N-butane -----	1.15	-29.4		
Iso-pentane -----	0.254	-28.5		
N-pentane -----	0.194	-28.5		
Hexanes + -----	0.102			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1170

Specific gravity, calculated: 0.677

Remarks: W43139 8503

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 #: 796311 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Francis Arens 4-6-15 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 286620
 Date Sampled: 6/14/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	0.123			
Argon -----	nd			
Oxygen -----	0.028			
Nitrogen -----	0.25			
Carbon Dioxide -----	2.61	4.4		
Methane -----	75.89	-46.9	-226	
Ethane -----	12.24	-29.5		
Ethylene -----	nd			
Propane -----	5.26	-25.9		
Propylene -----	nd			
Iso-butane -----	0.877	-29.8		
N-butane -----	1.75	-26.0		
Iso-pentane -----	0.442	-27.5		
N-pentane -----	0.381	-25.7		
Hexanes + -----	0.147			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1248

Specific gravity, calculated: 0.748

Remarks: W31522 8503

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 #: 796312 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Francis Arens 4-6-15 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 286620
 Date Sampled: 6/14/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0129			
Hydrogen -----	nd			
Argon -----	nd			
Oxygen -----	0.032			
Nitrogen -----	0.71			
Carbon Dioxide -----	0.006			
Methane -----	81.70	-49.4	-239	
Ethane -----	8.68	-33.0		
Ethylene -----	nd			
Propane -----	4.44	-29.0		
Propylene -----	nd			
Iso-butane -----	0.896	-31.5		
N-butane -----	1.86	-28.0		
Iso-pentane -----	0.592	-28.6		
N-pentane -----	0.476	-27.5		
Hexanes + -----	0.594			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1258

Specific gravity, calculated: 0.717

Remarks: W31522 8503

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 #: 796313 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Williams 43-18 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 282888
 Date Sampled: 6/07/2021 13:25 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0210			
Hydrogen -----	0.0338			
Argon -----	0.0076			
Oxygen -----	0.15			
Nitrogen -----	0.76			
Carbon Dioxide -----	2.09	2.7		
Methane -----	80.97	-48.3	-223	
Ethane -----	9.93	-30.3		
Ethylene -----	nd			
Propane -----	3.34	-26.5		
Propylene -----	nd			
Iso-butane -----	0.581	-29.8		
N-butane -----	1.24	-27.7		
Iso-pentane -----	0.396	-28.2		
N-pentane -----	0.390	-27.8		
Hexanes + -----	0.0934			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1179

Specific gravity, calculated: 0.702

Remarks: W32524 8503

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 #: 796314 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Woolley 33-8 / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 267688
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0132			
Hydrogen -----	0.0504			
Argon -----	nd			
Oxygen -----	0.034			
Nitrogen -----	0.47			
Carbon Dioxide -----	2.00	-2.2		
Methane -----	77.26	-47.9	-227	
Ethane -----	11.96	-31.0		
Ethylene -----	nd			
Propane -----	5.03	-28.2		
Propylene -----	nd			
Iso-butane -----	0.768	-30.7		
N-butane -----	1.71	-27.9		
Iso-pentane -----	0.327	-28.2		
N-pentane -----	0.237	-27.6		
Hexanes + -----	0.139			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1236

Specific gravity, calculated: 0.732

Remarks: W19541 8503

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 #: 796315 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Woolley 33-8 / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 267688
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0171			
Hydrogen -----	nd			
Argon -----	0.0058			
Oxygen -----	0.049			
Nitrogen -----	0.68			
Carbon Dioxide -----	0.007			
Methane -----	80.66	-49.6	-243	
Ethane -----	10.83	-32.4		
Ethylene -----	nd			
Propane -----	4.71	-27.9		
Propylene -----	nd			
Iso-butane -----	0.680	-31.2		
N-butane -----	1.42	-27.4		
Iso-pentane -----	0.382	-28.1		
N-pentane -----	0.287	-26.8		
Hexanes + -----	0.277			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1240

Specific gravity, calculated: 0.705

Remarks: W19541 8503

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 #: 796316 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Woolley Sosa 2F-7H / Production Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 434342
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0258			
Hydrogen -----	0.885			
Argon -----	0.0057			
Oxygen -----	0.033			
Nitrogen -----	0.81			
Carbon Dioxide -----	0.30	0.8		
Methane -----	93.75	-50.7	-242	
Ethane -----	3.99	-32.7		
Ethylene -----	0.0139			
Propane -----	0.0690	-27.2		
Propylene -----	nd			
Iso-butane -----	0.0005			
N-butane -----	0.0017			
Iso-pentane -----	0.0015			
N-pentane -----	0.0024			
Hexanes + -----	0.107			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1032

Specific gravity, calculated: 0.579

Remarks: C77447 8503

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 #: 796317 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Woolley Sosa 2F-7H / Surface Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 434342
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.104			
Hydrogen -----	0.0324			
Argon -----	0.0493			
Oxygen -----	0.11			
Nitrogen -----	5.67			
Carbon Dioxide -----	nd			
Methane -----	93.77	-51.0	-237	
Ethane -----	0.215	-27.8		
Ethylene -----	0.0002			
Propane -----	0.0032			
Propylene -----	nd			
Iso-butane -----	0.0011			
N-butane -----	0.0042			
Iso-pentane -----	0.0027			
N-pentane -----	0.0041			
Hexanes + -----	0.0374			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 957

Specific gravity, calculated: 0.580

Remarks: C77447 8503

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 #: 796318 Job #: 48072 IS-94649 Co. Job#:
 Sample Name: Woolley Sosa 2F-7H / Intermediate Casing Co. Lab#:
 Company: Crestone Peak Resources
 API/Well:
 Container: IsoTube®
 Field/Site Name: Bradenhead Testing
 Location:
 Formation:
 Sampling Point: 434342
 Date Sampled: 5/19/2021 Date Received: 6/29/2021 Date Reported: 7/20/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	0.363			
Argon -----	0.0416			
Oxygen -----	0.033			
Nitrogen -----	2.83			
Carbon Dioxide -----	nd			
Methane -----	93.74	-48.1	-240	
Ethane -----	2.44	-30.7		
Ethylene -----	nd			
Propane -----	0.376	-27.6		
Propylene -----	0.0001			
Iso-butane -----	0.0446	-30.9		
N-butane -----	0.0675	-27.4		
Iso-pentane -----	0.0128	-28.2		
N-pentane -----	0.0126	-27.7		
Hexanes + -----	0.0423			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1011

Specific gravity, calculated: 0.583

Remarks: C77447 8503

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. %.