

Lab #: 785077 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Grant Hurt 1E-14H / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 434317   
 Date Sampled: 2/01/2021 14:50 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0287			
Hydrogen -----	1.15			
Argon -----	0.0078			
Oxygen -----	0.072			
Nitrogen -----	0.89			
Carbon Dioxide -----	0.20	-1.5		
Methane -----	88.32	-51.4	-239	
Ethane -----	7.94	-33.6		
Ethylene -----	0.0050			
Propane -----	1.24	-29.1		
Propylene -----	nd			
Iso-butane -----	0.0406	-30.5		
N-butane -----	0.0268	-26.6		
Iso-pentane -----	0.0007			
N-pentane -----	0.0009			
Hexanes + -----	0.0800			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1078

Specific gravity, calculated: 0.608

Remarks: C74458 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 #: 785078 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Grant Hurt 1E-14H / Intermediate Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 434317   
 Date Sampled: 2/01/2021 14:58 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.207			
Oxygen -----	4.74			
Nitrogen -----	17.46			
Carbon Dioxide -----	0.37	10.7		
Methane -----	77.07	-52.5	-267	
Ethane -----	0.0346	-33.1		
Ethylene -----	0.0001			
Propane -----	0.0328	-29.6		
Propylene -----	0.0009			
Iso-butane -----	0.0084			
N-butane -----	0.0268	-28.6		
Iso-pentane -----	0.0137	-29.0		
N-pentane -----	0.0182	-27.9		
Hexanes + -----	0.0210			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 786

Specific gravity, calculated: 0.660

Remarks: C74458 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 #: 785079 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Herbers 31-20 / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 251890   
 Date Sampled: 1/28/2021 8:00 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0118			
Hydrogen -----	0.178			
Argon -----	0.0087			
Oxygen -----	0.16			
Nitrogen -----	0.77			
Carbon Dioxide -----	1.84	2.8		
Methane -----	74.60	-48.6	-248	
Ethane -----	12.45	-33.3		
Ethylene -----	0.0002			
Propane -----	5.86	-29.8		
Propylene -----	nd			
Iso-butane -----	0.809	-32.0		
N-butane -----	2.16	-28.5		
Iso-pentane -----	0.494	-28.7		
N-pentane -----	0.545	-28.4		
Hexanes + -----	0.111			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1273

Specific gravity, calculated: 0.758

Remarks: 16192256 9728

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 #: 785080 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Horn Libsack 1 / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 242428   
 Date Sampled: 1/20/2021 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0053			
Hydrogen -----	0.0802			
Argon -----	0.0537			
Oxygen -----	1.28			
Nitrogen -----	4.59			
Carbon Dioxide -----	2.72	3.7		
Methane -----	69.63	-45.2	-219	
Ethane -----	11.95	-29.1		
Ethylene -----	0.0006			
Propane -----	5.36	-25.9		
Propylene -----	nd			
Iso-butane -----	1.03	-29.5		
N-butane -----	2.14	-25.6		
Iso-pentane -----	0.597	-27.2		
N-pentane -----	0.509	-25.2		
Hexanes + -----	0.0538			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1207

Specific gravity, calculated: 0.785

Remarks: W768125 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 #: 785081 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Kaminsky 1-30 / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 239371   
 Date Sampled: 1/22/2021 12:45 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0089			
Hydrogen -----	0.0287			
Argon -----	0.680			
Oxygen -----	15.26			
Nitrogen -----	57.20			
Carbon Dioxide -----	1.05	1.8		
Methane -----	21.05	-47.8	-233	
Ethane -----	3.25	-31.5		
Ethylene -----	nd			
Propane -----	0.978	-26.7		
Propylene -----	nd			
Iso-butane -----	0.137	-28.9		
N-butane -----	0.199	-25.8		
Iso-pentane -----	0.0713	-27.3		
N-pentane -----	0.0435	-25.8		
Hexanes + -----	0.0460			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 313

Specific gravity, calculated: 0.923

Remarks: C762685 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 #: 785083 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Kiyota 33-35 / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 258610   
 Date Sampled: 1/27/2021 15:23 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0225			
Hydrogen -----	nd			
Argon -----	0.223			
Oxygen -----	5.08			
Nitrogen -----	19.66			
Carbon Dioxide -----	0.53	-8.8		
Methane -----	60.64	-52.1	-244	
Ethane -----	6.04	-36.2		
Ethylene -----	nd			
Propane -----	4.76	-31.4		
Propylene -----	nd			
Iso-butane -----	0.708	-32.8		
N-butane -----	1.41	-29.9		
Iso-pentane -----	0.414	-29.1		
N-pentane -----	0.344	-29.5		
Hexanes + -----	0.168			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 951

Specific gravity, calculated: 0.795

Remarks: W9660 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 #: 785084 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Kiyota 33-35 / Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 258610   
 Date Sampled: 1/27/2021 15:20 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0103			
Hydrogen -----	0.0480			
Argon -----	0.0096			
Oxygen -----	0.17			
Nitrogen -----	0.76			
Carbon Dioxide -----	2.06	2.9		
Methane -----	76.74	-48.1	-243	
Ethane -----	12.48	-32.9		
Ethylene -----	0.0001			
Propane -----	4.98	-29.3		
Propylene -----	nd			
Iso-butane -----	0.587	-31.4		
N-butane -----	1.36	-28.2		
Iso-pentane -----	0.410	-28.4		
N-pentane -----	0.351	-27.5		
Hexanes + -----	0.0351			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1224

Specific gravity, calculated: 0.730

Remarks: W9660 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 #: 785085 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Kugel 21-18 / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 260647   
 Date Sampled: 12/29/2020 13:20 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0242			
Hydrogen -----	0.0623			
Argon -----	0.0875			
Oxygen -----	0.54			
Nitrogen -----	7.82			
Carbon Dioxide -----	1.16	-0.8		
Methane -----	82.85	-46.7	-220	
Ethane -----	6.47	-29.9		
Ethylene -----	0.0010			
Propane -----	0.853	-25.0		
Propylene -----	nd			
Iso-butane -----	0.0688	-26.9		
N-butane -----	0.0480	-23.8		
Iso-pentane -----	0.0093			
N-pentane -----	0.0048			
Hexanes + -----	0.0049			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 982

Specific gravity, calculated: 0.642

Remarks: C762089 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 #: 785086 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Kugel 21-18 / Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 260647   
 Date Sampled: 12/29/2020 13:10 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0143			
Hydrogen -----	nd			
Argon -----	0.561			
Oxygen -----	12.61			
Nitrogen -----	47.08			
Carbon Dioxide -----	0.054	-11.7		
Methane -----	31.43	-49.4	-247	
Ethane -----	4.70	-33.8		
Ethylene -----	0.0003			
Propane -----	2.28	-29.9		
Propylene -----	nd			
Iso-butane -----	0.295	-31.9		
N-butane -----	0.652	-28.8		
Iso-pentane -----	0.139	-28.4		
N-pentane -----	0.134	-28.4		
Hexanes + -----	0.0515			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 504

Specific gravity, calculated: 0.888

Remarks: C762089 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 #: 785087 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Libsack 4-8-27 / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 292016   
 Date Sampled: 1/20/2021 13:08 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0075			
Hydrogen -----	0.337			
Argon -----	0.0509			
Oxygen -----	1.19			
Nitrogen -----	4.38			
Carbon Dioxide -----	2.04	3.6		
Methane -----	74.35	-46.4	-221	
Ethane -----	10.52	-30.2		
Ethylene -----	0.0008			
Propane -----	4.32	-26.5		
Propylene -----	nd			
Iso-butane -----	0.704	-29.9		
N-butane -----	1.25	-25.9		
Iso-pentane -----	0.350	-27.2		
N-pentane -----	0.307	-25.5		
Hexanes + -----	0.189			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1152

Specific gravity, calculated: 0.736

Remarks: W41325 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 #: 785089 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Lochbuie Land 2A-25H / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 457595   
 Date Sampled: 1/25/2021 9:00 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0131			
Hydrogen -----	0.727			
Argon -----	0.0343			
Oxygen -----	0.65			
Nitrogen -----	3.35			
Carbon Dioxide -----	0.035			
Methane -----	78.79	-50.3	-270	
Ethane -----	10.13	-35.7		
Ethylene -----	nd			
Propane -----	4.28	-31.3		
Propylene -----	nd			
Iso-butane -----	0.438	-32.5		
N-butane -----	1.05	-29.1		
Iso-pentane -----	0.190	-28.5		
N-pentane -----	0.211	-28.7		
Hexanes + -----	0.0987			

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

Specific gravity, calculated: 0.691

Remarks: C82400 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 #: 785091 Job #: 47086 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: 12/30/2020 8:25 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0096			
Hydrogen -----	0.0737			
Argon -----	0.101			
Oxygen -----	2.42			
Nitrogen -----	8.88			
Carbon Dioxide -----	1.37	1.6		
Methane -----	68.28	-47.1	-232	
Ethane -----	11.67	-31.5		
Ethylene -----	0.0002			
Propane -----	4.82	-28.1		
Propylene -----	nd			
Iso-butane -----	0.616	-30.9		
N-butane -----	1.30	-27.1		
Iso-pentane -----	0.244	-27.8		
N-pentane -----	0.203	-27.0		
Hexanes + -----	0.0134			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1104

Specific gravity, calculated: 0.758

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 #: 785092 Job #: 47086 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: 12/30/2020 8:30 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0627			
Hydrogen -----	0.0157			
Argon -----	0.154			
Oxygen -----	3.33			
Nitrogen -----	14.83			
Carbon Dioxide -----	0.017			
Methane -----	73.56	-54.8	-226	
Ethane -----	4.23	-33.1		
Ethylene -----	nd			
Propane -----	2.61	-29.8		
Propylene -----	nd			
Iso-butane -----	0.374	-31.6		
N-butane -----	0.654	-28.8		
Iso-pentane -----	0.0943	-28.1		
N-pentane -----	0.0574	-27.4		
Hexanes + -----	0.0097			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 927

Specific gravity, calculated: 0.699

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 #: 785093 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Lumry 42-24 / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 331   
 Date Sampled: 1/28/2021 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0111			
Hydrogen -----	0.0212			
Argon -----	0.0091			
Oxygen -----	0.18			
Nitrogen -----	0.86			
Carbon Dioxide -----	2.00	2.5		
Methane -----	75.47	-46.9	-232	
Ethane -----	12.07	-31.2		
Ethylene -----	0.0005			
Propane -----	5.40	-27.8		
Propylene -----	nd			
Iso-butane -----	0.885	-30.7		
N-butane -----	2.05	-27.5		
Iso-pentane -----	0.504	-27.9		
N-pentane -----	0.492	-27.2		
Hexanes + -----	0.0484			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1257

Specific gravity, calculated: 0.752

Remarks: W43435 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 #: 785094 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Lumry 42-24 / Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 331   
 Date Sampled: 1/28/2021 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0561			
Hydrogen -----	nd			
Argon -----	0.0407			
Oxygen -----	0.78			
Nitrogen -----	4.63			
Carbon Dioxide -----	0.008			
Methane -----	81.78	-53.6	-230	
Ethane -----	6.14	-33.5		
Ethylene -----	nd			
Propane -----	4.31	-31.1		
Propylene -----	0.0001			
Iso-butane -----	0.622	-31.9		
N-butane -----	1.09	-29.6		
Iso-pentane -----	0.240	-28.5		
N-pentane -----	0.213	-28.7		
Hexanes + -----	0.0941			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1127

Specific gravity, calculated: 0.685

Remarks: W43435 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 #: 785095 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Miller 33-20 / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 259366   
 Date Sampled: 2/01/2021 17:01 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0139			
Hydrogen -----	0.215			
Argon -----	0.0122			
Oxygen -----	0.26			
Nitrogen -----	1.10			
Carbon Dioxide -----	2.95	3.7		
Methane -----	79.37	-45.9	-219	
Ethane -----	10.72	-29.9		
Ethylene -----	0.0004			
Propane -----	3.40	-25.9		
Propylene -----	0.0002			
Iso-butane -----	0.544	-28.9		
N-butane -----	0.852	-25.9		
Iso-pentane -----	0.278	-27.5		
N-pentane -----	0.197	-26.1		
Hexanes + -----	0.0859			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1152

Specific gravity, calculated: 0.704

Remarks: C761668 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 #: 785096 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: Miller 33-20 / Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 259366   
 Date Sampled: 2/01/2021 16:55 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0096			
Hydrogen -----	0.0117			
Argon -----	0.172			
Oxygen -----	3.99			
Nitrogen -----	14.96			
Carbon Dioxide -----	1.24	-0.7		
Methane -----	65.08	-47.1	-234	
Ethane -----	9.18	-32.4		
Ethylene -----	nd			
Propane -----	3.62	-27.9		
Propylene -----	nd			
Iso-butane -----	0.462	-30.7		
N-butane -----	0.812	-26.8		
Iso-pentane -----	0.192	-28.0		
N-pentane -----	0.169	-26.7		
Hexanes + -----	0.0969			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 976

Specific gravity, calculated: 0.758

Remarks: C761668 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 #: 785097 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: State 3G-16H / Production Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 433169   
 Date Sampled: 12/28/2020 14:55 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0143			
Hydrogen -----	0.0719			
Argon -----	0.0103			
Oxygen -----	0.19			
Nitrogen -----	0.97			
Carbon Dioxide -----	0.96	-0.1		
Methane -----	73.95	-50.2	-257	
Ethane -----	13.77	-34.4		
Ethylene -----	0.0009			
Propane -----	7.07	-29.9		
Propylene -----	nd			
Iso-butane -----	0.845	-31.3		
N-butane -----	1.85	-27.6		
Iso-pentane -----	0.182	-27.3		
N-pentane -----	0.108	-26.7		
Hexanes + -----	0.0043			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1276

Specific gravity, calculated: 0.748

Remarks: C72567 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 #: 785098 Job #: 47086 IS-94649 Co. Job#:   
 Sample Name: State 3G-16H / Surface Casing Co. Lab#:   
 Company: Crestone Peak Resources   
 API/Well:   
 Container: IsoTube®   
 Field/Site Name: Bradenhead Testing   
 Location:   
 Formation:   
 Sampling Point: 433169   
 Date Sampled: 12/28/2020 14:50 Date Received: 3/01/2021 Date Reported: 3/29/2021

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	$\delta\text{D}$ ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0361			
Hydrogen -----	nd			
Argon -----	0.0745			
Oxygen -----	1.59			
Nitrogen -----	6.93			
Carbon Dioxide -----	0.010			
Methane -----	77.11	-50.6	-259	
Ethane -----	9.42	-34.9		
Ethylene -----	nd			
Propane -----	3.65	-30.4		
Propylene -----	nd			
Iso-butane -----	0.349	-31.9		
N-butane -----	0.655	-29.0		
Iso-pentane -----	0.0858	-28.3		
N-pentane -----	0.0658	-28.7		
Hexanes + -----	0.0216			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1082

Specific gravity, calculated: 0.691

Remarks: C72567 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. %.