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Lab #:	769312	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Parker 21-33 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	263245				
Date Sampled:	7/10/2020	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0198			
Hydrogen	nd			
Argon	0.222			
Oxygen	4.99			
Nitrogen	17.15			
Carbon Dioxide	0.031			
Methane	64.74	-50.8	-252	
Ethane	7.41	-35.3		
Ethylene	nd			
Propane	3.83	-30.8		
Propylene	nd			
Iso-butane	0.407	-32.2		
N-butane	0.783	-29.3		
Iso-pentane	0.167	-28.4		
N-pentane	0.143	-28.1		
Hexanes +	0.106			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 942
Specific gravity, calculated: 0.753

Remarks: W762514

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. %.

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Lab #:	769313	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	File 3A-32H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	452934				
Date Sampled:	7/20/2200	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0503			
Hydrogen	nd			
Argon	0.0344			
Oxygen	0.33			
Nitrogen	3.00			
Carbon Dioxide	0.008			
Methane	94.82	-49.9	-242	
Ethane	1.72	-30.7		
Ethylene	nd			
Propane	0.0189	-28.1		
Propylene	nd			
Iso-butane	0.0018			
N-butane	0.0031			
Iso-pentane	0.0009			
N-pentane	nd			
Hexanes +	0.0087			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 993
Specific gravity, calculated: 0.577

Remarks: C82210

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. %.

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Lab #:	769314	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Bearden 24-6 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	282845				
Date Sampled:	8/10/2020	8:00	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0160			
Hydrogen	nd			
Argon	0.522			
Oxygen	13.01			
Nitrogen	45.09			
Carbon Dioxide	0.053	-11.5		
Methane	34.77	-51.2	-246	
Ethane	3.56	-33.9		
Ethylene	nd			
Propane	1.91	-29.8		
Propylene	nd			
Iso-butane	0.287	-31.8		
N-butane	0.499	-28.8		
Iso-pentane	0.121	-28.5		
N-pentane	0.104	-27.9		
Hexanes +	0.0538			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 501
Specific gravity, calculated: 0.870

Remarks: W34887

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. %.

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Lab #:	769315	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Kiyota 4M-35H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	452881				
Date Sampled:	7/28/2020 2:07	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.927			
Oxygen	21.45			
Nitrogen	77.54			
Carbon Dioxide	0.082	-12.3		
Methane	0.0008			
Ethane	nd			
Ethylene	nd			
Propane	nd			
Propylene	nd			
Iso-butane	nd			
N-butane	nd			
Iso-pentane	nd			
N-pentane	nd			
Hexanes +	0.0001			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0
Specific gravity, calculated: 1.001

Remarks: C10100

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. %.

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Lab #:	769316	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Edith Ann 1 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	245038				
Date Sampled:	7/13/2020	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0097			
Hydrogen	nd			
Argon	0.0341			
Oxygen	0.72			
Nitrogen	2.46			
Carbon Dioxide	1.63			
Methane	75.83			
Ethane	12.01			
Ethylene	nd			
Propane	4.87			
Propylene	nd			
Iso-butane	0.610			
N-butane	1.29			
Iso-pentane	0.248			
N-pentane	0.216			
Hexanes +	0.0716			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1191
Specific gravity, calculated: 0.728

Remarks: Sample compromised after compositional analysis
W9648

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. %.

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Lab #:	769317	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Kiyota 4N-35H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	452879				
Date Sampled:	7/28/2020 14:10	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0203			
Hydrogen	nd			
Argon	0.349			
Oxygen	7.79			
Nitrogen	28.11			
Carbon Dioxide	0.030			
Methane	61.92	-49.8	-248	
Ethane	1.76	-33.1		
Ethylene	nd			
Propane	0.0228	-27.0		
Propylene	nd			
Iso-butane	0.0006			
N-butane	0.0009			
Iso-pentane	0.0002			
N-pentane	0.0002			
Hexanes +	0.0002			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 659
Specific gravity, calculated: 0.725

Remarks: C10101

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. %.

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Lab #:	769318	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Cosslett 1E-22H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	456855				
Date Sampled:	7/31/2020 7:55	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.888			
Oxygen	21.57			
Nitrogen	77.44			
Carbon Dioxide	0.087	-11.7		
Methane	0.0147			
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: C82273

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. %.

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Lab #:	769319	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Becky 2F-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434334				
Date Sampled:	7/30/2020	8:39	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0249			
Hydrogen	nd			
Argon	0.233			
Oxygen	5.16			
Nitrogen	18.06			
Carbon Dioxide	0.026			
Methane	71.06	-48.5	-245	
Ethane	4.73	-32.2		
Ethylene	nd			
Propane	0.675	-27.7		
Propylene	nd			
Iso-butane	0.0186	-29.8		
N-butane	0.0092			
Iso-pentane	0.0012			
N-pentane	0.0008			
Hexanes +	0.0004			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 822
Specific gravity, calculated: 0.689

Remarks: C75032

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. %.

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Lab #:	769320	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Becky 2G-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	436733				
Date Sampled:	7/30/2020	8:45	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.917			
Oxygen	21.15			
Nitrogen	77.84			
Carbon Dioxide	0.089	-11.9		
Methane	0.0003			
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: C75033

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. %.

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Lab #:	769321	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Cosslett 1D-22H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	456854				
Date Sampled:	7/31/2020 7:57	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.885			
Oxygen	21.78			
Nitrogen	77.25			
Carbon Dioxide	0.089	-11.7		
Methane	0.0007			
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: C82272

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. %.

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Lab #:	769324	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Becky 2C-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	436731				
Date Sampled:	7/30/2020	8:35	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.909			
Oxygen	21.73			
Nitrogen	77.28			
Carbon Dioxide	0.085	-11.8		
Methane	0.0003			
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: C75029

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. %.

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Lab #:	769325	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Cosslett 1C-22H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	456848				
Date Sampled:	7/31/2020	8:00	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0194			
Hydrogen	0.0288			
Argon	0.0267			
Oxygen	0.27			
Nitrogen	2.26			
Carbon Dioxide	0.007			
Methane	92.76	-49.7	-244	
Ethane	4.36	-33.6		
Ethylene	nd			
Propane	0.266	-27.1		
Propylene	nd			
Iso-butane	0.0015			
N-butane	0.0001			
Iso-pentane	nd			
N-pentane	nd			
Hexanes +	0.0001			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1025
Specific gravity, calculated: 0.589

Remarks: C82271

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. %.

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Lab #:	769326	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Becky 2H-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434340				
Date Sampled:	7/30/2020	8:45	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0582			
Hydrogen	1.62			
Argon	0.243			
Oxygen	2.15			
Nitrogen	19.53			
Carbon Dioxide	0.014			
Methane	76.10	-50.7	-231	
Ethane	0.238	-33.9		
Ethylene	0.0010			
Propane	0.0376	-29.2		
Propylene	0.0002			
Iso-butane	0.0033			
N-butane	0.0053			
Iso-pentane	0.0010			
N-pentane	0.0009			
Hexanes +	0.0006			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 782
Specific gravity, calculated: 0.642

Remarks: C75034

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. %.

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Lab #:	769327	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Sosa 2C-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	436738				
Date Sampled:	7/30/2020	8:18	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.870			
Oxygen	20.36			
Nitrogen	78.70			
Carbon Dioxide	0.064	-11.2		
Methane	0.0017			
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: C77446

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. %.

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Lab #:	769328	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Sosa 2D-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434335				
Date Sampled:	7/30/2020	8:23	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.908			
Oxygen	21.31			
Nitrogen	77.69			
Carbon Dioxide	0.087	-11.5		
Methane	0.0007			
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: C77448

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. %.

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Lab #:	769329	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Morgan Hills 1F-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	446289				
Date Sampled:	7/29/2020 12:53	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0510			
Hydrogen	nd			
Argon	0.171			
Oxygen	3.67			
Nitrogen	13.10			
Carbon Dioxide	0.020			
Methane	78.56	-49.5	-243	
Ethane	4.34	-33.0		
Ethylene	nd			
Propane	0.0901	-27.1		
Propylene	nd			
Iso-butane	0.0010			
N-butane	0.0011			
Iso-pentane	0.0002			
N-pentane	0.0002			
Hexanes +	0.0003			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 876
Specific gravity, calculated: 0.652

Remarks: C81149

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. %.

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Lab #:	769330	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Becky 2B-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434338				
Date Sampled:	7/30/2020	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.934			
Oxygen	21.27			
Nitrogen	77.71			
Carbon Dioxide	0.088	-11.4		
Methane	0.0010			
Ethane	0.0003			
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: C75028

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. %.

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Lab #:	769331	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Sosa 2E-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434339				
Date Sampled:	7/30/2020	8:28	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.932			
Oxygen	21.40			
Nitrogen	77.58			
Carbon Dioxide	0.089	-11.3		
Methane	0.0007			
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: C77445

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. %.

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Lab #:	769332	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Morgan Hills 1E-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	446282				
Date Sampled:	7/29/2020 12:48	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0384			
Hydrogen	nd			
Argon	0.0695			
Oxygen	1.37			
Nitrogen	5.67			
Carbon Dioxide	0.009			
Methane	84.99	-48.9	-246	
Ethane	6.22	-33.0		
Ethylene	nd			
Propane	1.42	-28.9		
Propylene	nd			
Iso-butane	0.102	-31.2		
N-butane	0.113	-26.7		
Iso-pentane	0.0010			
N-pentane	0.0002			
Hexanes +	0.0002			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1016
Specific gravity, calculated: 0.632

Remarks: C81148

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. %.

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Lab #:	769333	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Kiyota 4I-35H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	438720				
Date Sampled:	7/28/2020 1:55	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0672			
Hydrogen	0.0214			
Argon	0.303			
Oxygen	2.19			
Nitrogen	24.59			
Carbon Dioxide	0.014			
Methane	72.54	-50.4	-242	
Ethane	0.235	-30.5		
Ethylene	0.0002			
Propane	0.0282	-28.8		
Propylene	nd			
Iso-butane	nd			
N-butane	0.0041			
Iso-pentane	0.0008			
N-pentane	0.0010			
Hexanes +	0.0016			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 740
Specific gravity, calculated: 0.671

Remarks: C77978

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. %.

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Lab #:	769334	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Waste Connections 3C-29H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434372				
Date Sampled:	7/29/2020	9:55	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0357			
Hydrogen	nd			
Argon	0.0139			
Oxygen	0.22			
Nitrogen	2.22			
Carbon Dioxide	0.008			
Methane	92.32	-50.9	-243	
Ethane	4.36	-34.8		
Ethylene	nd			
Propane	0.790	-29.2		
Propylene	nd			
Iso-butane	0.0215	-29.6		
N-butane	0.0058			
Iso-pentane	0.0002			
N-pentane	0.0003			
Hexanes +	0.0003			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1035
Specific gravity, calculated: 0.594

Remarks: C73985

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. %.

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Lab #:	769335	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley Sosa 2D-7H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434335				
Date Sampled:	7/30/2020	8:21	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0527			
Hydrogen	nd			
Argon	0.430			
Oxygen	9.64			
Nitrogen	35.81			
Carbon Dioxide	0.047			
Methane	53.88	-50.4	-237	
Ethane	0.0854	-31.7		
Ethylene	0.0001			
Propane	0.0418	-28.4		
Propylene	nd			
Iso-butane	nd			
N-butane	0.0108	-27.7		
Iso-pentane	0.0017			
N-pentane	0.0015			
Hexanes +	0.0007			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 549
Specific gravity, calculated: 0.760

Remarks: C77448

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. %.

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Lab #:	769336	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Pratt 4E-29H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434529				
Date Sampled:	7/29/2020 7:28	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.232			
Hydrogen	nd			
Argon	0.150			
Oxygen	0.42			
Nitrogen	17.91			
Carbon Dioxide	0.008			
Methane	81.25	-56.3	-216	
Ethane	0.0199			
Ethylene	nd			
Propane	0.0047			
Propylene	nd			
Iso-butane	0.0006			
N-butane	0.0012			
Iso-pentane	0.0003			
N-pentane	0.0003			
Hexanes +	0.0003			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 824
Specific gravity, calculated: 0.631

Remarks: C73992

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. %.

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Lab #:	769337	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Kiyota 4L-35H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	438856				
Date Sampled:	7/28/2020 2:04	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0469			
Hydrogen	nd			
Argon	0.124			
Oxygen	2.05			
Nitrogen	9.58			
Carbon Dioxide	0.008			
Methane	87.01	-50.0	-247	
Ethane	1.17	-32.7		
Ethylene	nd			
Propane	0.0049			
Propylene	nd			
Iso-butane	0.0003			
N-butane	0.0006			
Iso-pentane	0.0001			
N-pentane	0.0002			
Hexanes +	0.0006			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 903
Specific gravity, calculated: 0.611

Remarks: C77979

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. %.

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Lab #:	769338	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Pratt 4G-29H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	434525				
Date Sampled:	7/29/2020 7:36	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.146			
Hydrogen	nd			
Argon	0.128			
Oxygen	1.11			
Nitrogen	14.37			
Carbon Dioxide	0.011			
Methane	78.93	-53.5	-227	
Ethane	3.90	-32.1		
Ethylene	0.0004			
Propane	1.07	-29.0		
Propylene	0.0012			
Iso-butane	0.0860	-31.4		
N-butane	0.189	-28.2		
Iso-pentane	0.0230	-28.4		
N-pentane	0.0208	-27.4		
Hexanes +	0.0109			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 908
Specific gravity, calculated: 0.654

Remarks: C73994

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. %.

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Lab #:	769339	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	East Rinn 23-15 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	275921				
Date Sampled:	8/12/2020	9:36	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0710			
Hydrogen	nd			
Argon	0.0933			
Oxygen	1.51			
Nitrogen	7.55			
Carbon Dioxide	0.012			
Methane	78.82	-53.7	-240	
Ethane	6.65	-33.8		
Ethylene	nd			
Propane	3.58	-29.3		
Propylene	nd			
Iso-butane	0.541	-31.6		
N-butane	0.810	-27.9		
Iso-pentane	0.187	-28.3		
N-pentane	0.125	-27.9		
Hexanes +	0.0483			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1067
Specific gravity, calculated: 0.688

Remarks: W20698

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. %.

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Lab #:	769340	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Rasmussen 4-6-19 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	419433				
Date Sampled:	8/12/2020	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0192			
Hydrogen	nd			
Argon	0.0400			
Oxygen	0.76			
Nitrogen	3.08			
Carbon Dioxide	0.011			
Methane	82.57	-48.7	-245	
Ethane	8.47	-33.1		
Ethylene	nd			
Propane	3.11	-28.9		
Propylene	nd			
Iso-butane	0.385	-31.3		
N-butane	0.832	-27.6		
Iso-pentane	0.259	-28.5		
N-pentane	0.251	-27.6		
Hexanes +	0.208			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1138
Specific gravity, calculated: 0.675

Remarks: W69240

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. %.

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Lab #:	769341	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley 11-7 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	421621				
Date Sampled:	8/10/2020	11:39	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0224			
Hydrogen	0.0168			
Argon	0.0630			
Oxygen	1.29			
Nitrogen	4.89			
Carbon Dioxide	0.011			
Methane	77.78	-50.0	-250	
Ethane	8.96	-35.1		
Ethylene	nd			
Propane	4.49	-30.5		
Propylene	nd			
Iso-butane	0.544	-32.4		
N-butane	1.21	-29.0		
Iso-pentane	0.293	-28.8		
N-pentane	0.263	-28.7		
Hexanes +	0.166			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1150
Specific gravity, calculated: 0.709

Remarks: W69512

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. %.

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Lab #:	769342	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Thomas 14-7 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	280826				
Date Sampled:	8/07/2020 11:45	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0297			
Hydrogen	0.0104			
Argon	0.0236			
Oxygen	0.43			
Nitrogen	2.23			
Carbon Dioxide	0.009			
Methane	79.68	-50.8	-242	
Ethane	9.38	-34.1		
Ethylene	nd			
Propane	5.22	-29.9		
Propylene	nd			
Iso-butane	0.692	-31.8		
N-butane	1.46	-28.6		
Iso-pentane	0.345	-28.6		
N-pentane	0.321	-28.0		
Hexanes +	0.168			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1213
Specific gravity, calculated: 0.710

Remarks: W38704

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. %.

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Lab #:	769343	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Coal Creek 6-4-19 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	297980				
Date Sampled:	8/03/2020	8:10	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0241			
Hydrogen	nd			
Argon	0.199			
Oxygen	4.41			
Nitrogen	15.64			
Carbon Dioxide	0.022			
Methane	65.75	-50.4	-248	
Ethane	7.24	-34.0		
Ethylene	nd			
Propane	4.40	-30.2		
Propylene	nd			
Iso-butane	0.543	-31.9		
N-butane	1.18	-28.6		
Iso-pentane	0.251	-29.0		
N-pentane	0.236	-28.2		
Hexanes +	0.108			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 988
Specific gravity, calculated: 0.759

Remarks: W53200

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. %.

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Lab #:	769344	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wiggett 2-13 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	418158				
Date Sampled:	8/11/2020	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0442			
Hydrogen	nd			
Argon	0.377			
Oxygen	8.93			
Nitrogen	31.39			
Carbon Dioxide	0.040			
Methane	48.10	-53.1	-239	
Ethane	4.85	-33.6		
Ethylene	nd			
Propane	3.50	-29.9		
Propylene	nd			
Iso-butane	0.582	-31.7		
N-butane	1.30	-28.5		
Iso-pentane	0.358	-28.6		
N-pentane	0.328	-27.8		
Hexanes +	0.201			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 761
Specific gravity, calculated: 0.839

Remarks: W64312

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. %.

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Lab #:	769345	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wiggett 32-13 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	293220				
Date Sampled:	8/11/2020 14:24	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.919			
Oxygen	21.79			
Nitrogen	77.21			
Carbon Dioxide	0.084	-11.3		
Methane	0.0005			
Ethane	nd			
Ethylene	nd			
Propane	nd			
Propylene	nd			
Iso-butane	nd			
N-butane	nd			
Iso-pentane	nd			
N-pentane	nd			
Hexanes +	0.0004			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0
Specific gravity, calculated: 1.002

Remarks: W43132

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. %.

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Lab #:	769346	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wiggett 12-13 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	295239				
Date Sampled:	8/11/2020	9:24	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0495			
Hydrogen	0.0157			
Argon	0.0865			
Oxygen	2.15			
Nitrogen	9.15			
Carbon Dioxide	0.012			
Methane	73.13	-52.2	-238	
Ethane	7.86	-33.6		
Ethylene	nd			
Propane	4.60	-29.6		
Propylene	nd			
Iso-butane	0.645	-31.6		
N-butane	1.37	-28.3		
Iso-pentane	0.354	-28.5		
N-pentane	0.339	-27.8		
Hexanes +	0.237			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1104
Specific gravity, calculated: 0.735

Remarks: W64313

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. %.

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Lab #:	769347	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Bearden 0-6-6 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	427330				
Date Sampled:	8/10/2020	8:15	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0177			
Hydrogen	nd			
Argon	0.0089			
Oxygen	0.20			
Nitrogen	0.95			
Carbon Dioxide	0.006			
Methane	80.39	-48.9	-249	
Ethane	11.14	-33.2		
Ethylene	nd			
Propane	4.86	-29.1		
Propylene	nd			
Iso-butane	0.573	-31.5		
N-butane	1.25	-27.7		
Iso-pentane	0.247	-28.4		
N-pentane	0.247	-27.7		
Hexanes +	0.115			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1222
Specific gravity, calculated: 0.699

Remarks: W72724

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. %.

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Lab #:	769348	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wiggett 2-4-13 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	418147				
Date Sampled:	8/11/2020	9:40	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0380			
Hydrogen	nd			
Argon	0.0631			
Oxygen	1.24			
Nitrogen	4.89			
Carbon Dioxide	0.012			
Methane	77.00	-50.6	-241	
Ethane	9.20	-33.7		
Ethylene	nd			
Propane	5.01	-29.6		
Propylene	nd			
Iso-butane	0.620	-31.8		
N-butane	1.29	-28.6		
Iso-pentane	0.280	-28.6		
N-pentane	0.242	-28.0		
Hexanes +	0.114			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1161
Specific gravity, calculated: 0.715

Remarks: W64317

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. %.

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Lab #:	769349	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wiggett 1-0-13 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	298777				
Date Sampled:	8/11/2020	9:42	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0552			
Hydrogen	nd			
Argon	0.0847			
Oxygen	1.48			
Nitrogen	7.74			
Carbon Dioxide	0.011			
Methane	76.57	-53.5	-237	
Ethane	7.53	-33.3		
Ethylene	nd			
Propane	4.49	-29.6		
Propylene	nd			
Iso-butane	0.577	-31.4		
N-butane	1.02	-28.4		
Iso-pentane	0.205	-28.2		
N-pentane	0.164	-27.6		
Hexanes +	0.0743			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1095
Specific gravity, calculated: 0.707

Remarks: W64316

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. %.

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Lab #:	769350	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Crandell 0-8-26 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	417898				
Date Sampled:	8/03/2020	1:53	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0140			
Hydrogen	nd			
Argon	0.247			
Oxygen	5.57			
Nitrogen	19.38			
Carbon Dioxide	0.030			
Methane	60.81	-49.5	-251	
Ethane	7.57	-33.8		
Ethylene	nd			
Propane	4.16	-29.9		
Propylene	nd			
Iso-butane	0.547	-32.2		
N-butane	1.07	-29.0		
Iso-pentane	0.223	-28.5		
N-pentane	0.201	-28.6		
Hexanes +	0.181			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 935
Specific gravity, calculated: 0.780

Remarks: W66731

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. %.

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Lab #:	769351	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Johnson 11-12 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	300269				
Date Sampled:	8/07/2020	1:16	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.953			
Oxygen	18.33			
Nitrogen	80.62			
Carbon Dioxide	0.092	-11.4		
Methane	0.0007			
Ethane	nd			
Ethylene	nd			
Propane	0.0001			
Propylene	nd			
Iso-butane	nd			
N-butane	nd			
Iso-pentane	nd			
N-pentane	nd			
Hexanes +	0.0006			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0
Specific gravity, calculated: 0.997

Remarks: W49309

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. %.

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Lab #:	769352	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Ione 4-2-10 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	419518				
Date Sampled:	8/06/2020	10:41	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0167			
Hydrogen	0.0186			
Argon	0.0452			
Oxygen	0.91			
Nitrogen	3.59			
Carbon Dioxide	0.011			
Methane	79.87	-50.2	-249	
Ethane	9.40	-35.3		
Ethylene	nd			
Propane	4.11	-30.6		
Propylene	nd			
Iso-butane	0.477	-32.1		
N-butane	0.970	-28.9		
Iso-pentane	0.220	-28.7		
N-pentane	0.188	-28.4		
Hexanes +	0.176			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1154
Specific gravity, calculated: 0.693

Remarks: W66666

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. %.

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Lab #:	769353	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wiggett 13-2 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	206613				
Date Sampled:	8/11/2020	8:29	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0462			
Hydrogen	nd			
Argon	0.163			
Oxygen	3.51			
Nitrogen	13.09			
Carbon Dioxide	0.084	-1.4		
Methane	70.20	-51.9	-236	
Ethane	7.03	-33.2		
Ethylene	0.0001			
Propane	3.86	-29.7		
Propylene	nd			
Iso-butane	0.469	-31.7		
N-butane	0.949	-28.2		
Iso-pentane	0.252	-28.5		
N-pentane	0.234	-27.7		
Hexanes +	0.113			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1006
Specific gravity, calculated: 0.734

Remarks: W768304

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. %.

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Lab #:	769354	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Haley G unit 1 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	206608				
Date Sampled:	8/04/2020	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0548			
Hydrogen	nd			
Argon	0.0499			
Oxygen	0.94			
Nitrogen	4.52			
Carbon Dioxide	0.015			
Methane	79.25	-52.6	-244	
Ethane	7.70	-34.7		
Ethylene	nd			
Propane	5.51	-30.8		
Propylene	nd			
Iso-butane	0.637	-31.9		
N-butane	1.03	-29.1		
Iso-pentane	0.141	-28.5		
N-pentane	0.108	-28.5		
Hexanes +	0.0467			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1148
Specific gravity, calculated: 0.699

Remarks: W768427

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. %.

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Lab #:	769355	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wiggett 22-13 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	418149				
Date Sampled:	8/11/2020	9:35	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0688			
Hydrogen	0.0494			
Argon	0.103			
Oxygen	1.90			
Nitrogen	8.79			
Carbon Dioxide	0.013			
Methane	75.58	-53.9	-231	
Ethane	6.69	-33.5		
Ethylene	nd			
Propane	4.35	-29.9		
Propylene	nd			
Iso-butane	0.610	-31.9		
N-butane	1.20	-28.7		
Iso-pentane	0.280	-28.4		
N-pentane	0.249	-28.0		
Hexanes +	0.116			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1082
Specific gravity, calculated: 0.715

Remarks: W64314

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. %.

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Lab #:	769356	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Bury Crandell 6-0-23 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	423158				
Date Sampled:	8/03/2020	4:05	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0282			
Hydrogen	nd			
Argon	0.0791			
Oxygen	1.40			
Nitrogen	6.26			
Carbon Dioxide	0.015			
Methane	76.18	-52.4	-244	
Ethane	6.66	-35.5		
Ethylene	nd			
Propane	6.02	-31.1		
Propylene	nd			
Iso-butane	0.875	-32.2		
N-butane	1.63	-29.7		
Iso-pentane	0.374	-28.6		
N-pentane	0.300	-28.9		
Hexanes +	0.183			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1162
Specific gravity, calculated: 0.733

Remarks: W68259

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. %.

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Lab #:	769357	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Giest 2-4-32 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	276694				
Date Sampled:	8/07/2020	2:49	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0339			
Hydrogen	0.0185			
Argon	0.0197			
Oxygen	0.29			
Nitrogen	2.36			
Carbon Dioxide	0.006			
Methane	79.58	-52.0	-251	
Ethane	10.19	-34.6		
Ethylene	nd			
Propane	5.08	-30.7		
Propylene	nd			
Iso-butane	0.557	-32.1		
N-butane	1.24	-29.0		
Iso-pentane	0.240	-28.5		
N-pentane	0.240	-28.2		
Hexanes +	0.140			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1203
Specific gravity, calculated: 0.703

Remarks: W17664

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. %.

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Lab #:	769358	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley 4-0-7 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	421635				
Date Sampled:	8/10/2020	11:36	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0235			
Hydrogen	nd			
Argon	0.0225			
Oxygen	0.45			
Nitrogen	1.94			
Carbon Dioxide	0.008			
Methane	80.52	-49.3	-246	
Ethane	10.10	-33.4		
Ethylene	nd			
Propane	4.57	-29.1		
Propylene	nd			
Iso-butane	0.565	-31.6		
N-butane	1.21	-27.8		
Iso-pentane	0.259	-28.4		
N-pentane	0.226	-27.8		
Hexanes +	0.111			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1196
Specific gravity, calculated: 0.696

Remarks: W69472

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. %.

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Lab #:	769359	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Ogren 1 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	206563				
Date Sampled:	8/04/2020 10:50	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0365			
Hydrogen	nd			
Argon	0.0160			
Oxygen	0.27			
Nitrogen	1.86			
Carbon Dioxide	0.008			
Methane	79.51	-52.5	-237	
Ethane	9.84	-34.0		
Ethylene	nd			
Propane	6.38	-29.9		
Propylene	nd			
Iso-butane	0.711	-31.6		
N-butane	1.09	-27.8		
Iso-pentane	0.139	-28.0		
N-pentane	0.0884	-26.4		
Hexanes +	0.0484			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1214
Specific gravity, calculated: 0.704

Remarks: W768238

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. %.

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Lab #:	769360	Job #:	45677	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:	8/10/2020	4:21	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0197			
Hydrogen	0.0477			
Argon	0.0434			
Oxygen	0.73			
Nitrogen	3.51			
Carbon Dioxide	0.008			
Methane	79.00	-48.8	-243	
Ethane	9.93	-32.4		
Ethylene	0.0002			
Propane	4.53	-28.9		
Propylene	0.0001			
Iso-butane	0.561	-31.5		
N-butane	1.11	-27.8		
Iso-pentane	0.225	-28.2		
N-pentane	0.191	-27.3		
Hexanes +	0.0901			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1169
Specific gravity, calculated: 0.699

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. %.

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Lab #:	769361	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wise F unit 1 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	206709				
Date Sampled:	8/04/2020	12:30	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.114			
Hydrogen	nd			
Argon	0.239			
Oxygen	5.02			
Nitrogen	20.95			
Carbon Dioxide	0.022			
Methane	69.95	-59.7	-214	
Ethane	1.78	-32.9		
Ethylene	nd			
Propane	1.25	-30.1		
Propylene	nd			
Iso-butane	0.189	-31.4		
N-butane	0.252	-28.1		
Iso-pentane	0.0697	-28.3		
N-pentane	0.0745	-27.4		
Hexanes +	0.0865			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 797
Specific gravity, calculated: 0.702

Remarks: W768320

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. %.

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Lab #:	769362	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Allan H unit 23-12 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	286686				
Date Sampled:	8/10/2020 2:03	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0351			
Hydrogen	0.0202			
Argon	0.151			
Oxygen	3.02			
Nitrogen	11.73			
Carbon Dioxide	0.028			
Methane	69.93	-51.8	-244	
Ethane	7.85	-33.8		
Ethylene	nd			
Propane	4.75	-30.1		
Propylene	nd			
Iso-butane	0.587	-31.8		
N-butane	1.23	-28.7		
Iso-pentane	0.269	-28.4		
N-pentane	0.252	-28.0		
Hexanes +	0.144			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1057
Specific gravity, calculated: 0.744

Remarks: W43125

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. %.

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Lab #:	769363	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Bearden 14-6 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	277971				
Date Sampled:	8/10/2020	8:10	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0155			
Hydrogen	nd			
Argon	0.365			
Oxygen	8.61			
Nitrogen	29.43			
Carbon Dioxide	0.037			
Methane	50.90	-49.3	-250	
Ethane	6.40	-33.0		
Ethylene	nd			
Propane	2.81	-29.1		
Propylene	nd			
Iso-butane	0.355	-31.4		
N-butane	0.733	-28.1		
Iso-pentane	0.150	-28.4		
N-pentane	0.139	-27.5		
Hexanes +	0.0602			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 751
Specific gravity, calculated: 0.807

Remarks: W19969

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. %.

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Lab #:	769364	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Dowdy 4-2-10 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	430088				
Date Sampled:	8/17/2020	3:40	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0151			
Hydrogen	nd			
Argon	0.187			
Oxygen	4.08			
Nitrogen	14.22			
Carbon Dioxide	0.024			
Methane	66.08	-49.8	-251	
Ethane	8.34	-35.3		
Ethylene	nd			
Propane	4.34	-30.9		
Propylene	nd			
Iso-butane	0.563	-32.5		
N-butane	1.23	-29.3		
Iso-pentane	0.340	-28.8		
N-pentane	0.314	-28.9		
Hexanes +	0.266			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1026
Specific gravity, calculated: 0.764

Remarks: W71692

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. %.

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Lab #:	769365	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Ione 6-8-4 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	417112				
Date Sampled:	8/17/2020 12:44	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0166			
Hydrogen	nd			
Argon	0.0666			
Oxygen	1.33			
Nitrogen	5.46			
Carbon Dioxide	0.010			
Methane	73.90	-50.4	-248	
Ethane	9.55	-35.1		
Ethylene	nd			
Propane	6.06	-30.6		
Propylene	nd			
Iso-butane	0.859	-32.3		
N-butane	1.72	-29.0		
Iso-pentane	0.423	-28.7		
N-pentane	0.351	-28.2		
Hexanes +	0.254			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1201
Specific gravity, calculated: 0.748

Remarks: W58481

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. %.

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Lab #:	769366	Job #:	45677	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:	8/17/2020	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0305			
Hydrogen	nd			
Argon	0.110			
Oxygen	2.18			
Nitrogen	8.36			
Carbon Dioxide	0.62	-9.0		
Methane	71.75	-52.1	-248	
Ethane	7.38	-36.2		
Ethylene	nd			
Propane	5.89	-31.4		
Propylene	nd			
Iso-butane	0.859	-32.6		
N-butane	1.69	-29.9		
Iso-pentane	0.470	-28.8		
N-pentane	0.397	-29.2		
Hexanes +	0.267			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1140
Specific gravity, calculated: 0.760

Remarks: W9660

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. %.

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Lab #:	769367	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Pratt 4-2-29 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	420035				
Date Sampled:	8/17/2020	8:05	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.0210			
Oxygen	0.39			
Nitrogen	1.64			
Carbon Dioxide	0.010			
Methane	74.92	-50.0	-250	
Ethane	13.12	-34.1		
Ethylene	nd			
Propane	6.92	-29.6		
Propylene	nd			
Iso-butane	0.796	-31.7		
N-butane	1.57	-28.2		
Iso-pentane	0.268	-28.2		
N-pentane	0.225	-27.7		
Hexanes +	0.119			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1273
Specific gravity, calculated: 0.741

Remarks: W69767

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. %.

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Lab #:	769368	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Kiyota 4G-35H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	438721				
Date Sampled:	7/28/2020 1:50	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0376			
Hydrogen	0.0358			
Argon	0.176			
Oxygen	1.45			
Nitrogen	11.55			
Carbon Dioxide	0.012			
Methane	86.05	-49.5	-242	
Ethane	0.660	-30.3		
Ethylene	0.0002			
Propane	0.0198	-28.9		
Propylene	nd			
Iso-butane	0.0001			
N-butane	0.0043			
Iso-pentane	0.0011			
N-pentane	0.0012			
Hexanes +	0.0023			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 885
Specific gravity, calculated: 0.614

Remarks: C77976

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. %.

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Lab #:	769369	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Herren 1D-33H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	457036				
Date Sampled:	7/28/2020	8:16	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0556			
Hydrogen	10.44			
Argon	0.112			
Oxygen	1.73			
Nitrogen	9.11			
Carbon Dioxide	0.018			
Methane	72.60	-51.2	-245	
Ethane	4.66	-34.2		
Ethylene	0.0083			
Propane	1.11	-30.1		
Propylene	nd			
Iso-butane	0.0710	-31.4		
N-butane	0.0733	-28.0		
Iso-pentane	0.0042			
N-pentane	0.0019			
Hexanes +	0.0010			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 886
Specific gravity, calculated: 0.587

Remarks: C82292

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. %.

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Lab #:	769370	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Herren 1H-33H Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	457038				
Date Sampled:	7/28/2020	10:26	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0280			
Hydrogen	0.936			
Argon	0.239			
Oxygen	5.25			
Nitrogen	18.85			
Carbon Dioxide	0.023			
Methane	67.64	-50.7	-252	
Ethane	5.27	-34.5		
Ethylene	0.0088			
Propane	1.48	-30.2		
Propylene	nd			
Iso-butane	0.109	-31.7		
N-butane	0.136	-28.4		
Iso-pentane	0.0153	-27.8		
N-pentane	0.0096			
Hexanes +	0.0016			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 829
Specific gravity, calculated: 0.702

Remarks: C82296

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. %.

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Lab #:	769371	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Wooley 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:	8/18/2020 11:02	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0163			
Hydrogen	0.0307			
Argon	0.124			
Oxygen	2.61			
Nitrogen	9.20			
Carbon Dioxide	0.018			
Methane	70.79	-48.0	-245	
Ethane	9.97	-32.4		
Ethylene	nd			
Propane	4.44	-28.2		
Propylene	nd			
Iso-butane	0.636	-30.9		
N-butane	1.31	-27.0		
Iso-pentane	0.360	-28.0		
N-pentane	0.286	-26.6		
Hexanes +	0.211			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1108
Specific gravity, calculated: 0.745

Remarks: W17666

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. %.

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Lab #:	769372	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Vessels 14-30 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	285990				
Date Sampled:	8/18/2020	9:43	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0122			
Hydrogen	nd			
Argon	0.512			
Oxygen	12.86			
Nitrogen	44.62			
Carbon Dioxide	0.057	-10.9		
Methane	34.35	-49.6	-243	
Ethane	4.48	-32.4		
Ethylene	nd			
Propane	2.01	-29.1		
Propylene	nd			
Iso-butane	0.255	-31.5		
N-butane	0.544	-28.1		
Iso-pentane	0.113	-28.4		
N-pentane	0.114	-28.0		
Hexanes +	0.0737			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 517
Specific gravity, calculated: 0.873

Remarks: W36074

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. %.

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Lab #:	769373	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Alcorn 1 Suface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	206562				
Date Sampled:	8/18/2020 7:52	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0454			
Hydrogen	nd			
Argon	0.0798			
Oxygen	1.56			
Nitrogen	6.51			
Carbon Dioxide	0.010			
Methane	79.24	-51.6	-242	
Ethane	7.95	-33.9		
Ethylene	nd			
Propane	3.45	-30.2		
Propylene	nd			
Iso-butane	0.319	-31.7		
N-butane	0.598	-28.6		
Iso-pentane	0.100	-28.2		
N-pentane	0.0944	-27.9		
Hexanes +	0.0465			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1073
Specific gravity, calculated: 0.680

Remarks: W768286

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. %.

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Lab #:	769374	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Alcorn 32-10 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	294745				
Date Sampled:	8/18/2020	8:22	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0598			
Hydrogen	nd			
Argon	0.391			
Oxygen	9.16			
Nitrogen	32.97			
Carbon Dioxide	0.061	-5.9		
Methane	53.31	-56.2	-222	
Ethane	2.03	-34.4		
Ethylene	nd			
Propane	1.33	-30.7		
Propylene	nd			
Iso-butane	0.181	-31.7		
N-butane	0.306	-29.0		
Iso-pentane	0.0676	-28.3		
N-pentane	0.0624	-28.1		
Hexanes +	0.0680			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 634
Specific gravity, calculated: 0.778

Remarks: W46835

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. %.

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Lab #:	769375	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Libsack 43-27 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	270165				
Date Sampled:	8/17/2020	Date Received:	9/01/2020	Date Reported:	10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0164			
Hydrogen	0.0537			
Argon	0.0188			
Oxygen	0.34			
Nitrogen	1.77			
Carbon Dioxide	0.011			
Methane	79.46	-49.1	-236	
Ethane	9.03	-33.1		
Ethylene	nd			
Propane	5.81	-29.1		
Propylene	nd			
Iso-butane	0.878	-30.9		
N-butane	1.51	-27.3		
Iso-pentane	0.463	-28.2		
N-pentane	0.371	-26.7		
Hexanes +	0.267			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1239
Specific gravity, calculated: 0.720

Remarks: W10351

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. %.

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Lab #:	769376	Job #:	45677	IS-94649	Co. Job#:
Sample Name:	Ione 4-4-2 Surface Casing				Co. Lab#:
Company:	Crestone Peak Resources				
API/Well:					
Container:	IsoTube®				
Field/Site Name:	Bradenhead Testing				
Location:					
Formation:					
Sampling Point:	416445				
Date Sampled:	8/01/7220	1:48	Date Received:	9/01/2020	Date Reported: 10/07/2020

Component	Chemical mol. %	$\delta^{13}C$ ‰	δD ‰	$\delta^{15}N$ ‰
Carbon Monoxide	nd			
Helium	0.0134			
Hydrogen	nd			
Argon	0.276			
Oxygen	6.32			
Nitrogen	21.90			
Carbon Dioxide	0.031			
Methane	59.01	-49.2	-248	
Ethane	7.07	-34.8		
Ethylene	nd			
Propane	3.52	-30.6		
Propylene	nd			
Iso-butane	0.454	-32.2		
N-butane	0.885	-29.1		
Iso-pentane	0.226	-28.9		
N-pentane	0.184	-28.4		
Hexanes +	0.106			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 878
Specific gravity, calculated: 0.780

Remarks: W72058

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. %.