

Lab #: 597315 Job #: 33958 IS-93248 Co. Job#: _____
 Sample Name: Mutual 0780 4-30H Co. Lab#: _____
 Company: SPL Inc.
 API/Well: _____
 Container: Tedlar Bag
 Field/Site Name: _____
 Location: _____
 Formation: _____
 Sampling Point: _____
 Date Sampled: 1/25/2017 14:01 Date Received: 2/02/2017 Date Reported: 2/20/2017

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0056			
Hydrogen -----	0.0912			
Argon -----	0.473			
Oxygen -----	0.80			
Nitrogen -----	42.71			
Carbon Dioxide -----	0.010			
Methane -----	16.80	-54.67	-298.4	
Ethane -----	10.48	-37.16		
Ethylene -----	0.0003			
Propane -----	21.10	-32.05		
Propylene -----	0.0006			
Iso-butane -----	2.13	-32.66		
N-butane -----	4.52	-29.70		
Iso-pentane -----	0.481	-27.59		
N-pentane -----	0.300	-28.25		
Hexanes + -----	0.101			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1147

Specific gravity, calculated: 1.108

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. %.

Isotech Gas Data

Job 33958
 CoreTrac IS-93248

All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19
 nd = not detected, na = not analyzed

Isotech Lab No.	Sample Name	Sample Date	Sample Time	GC Date	He %	H ₂ %	Ar %	O ₂ %	CO ₂ %	N ₂ %	CO %	C ₁ %	C ₂ %	C ₂ H ₄ %	C ₃ %	C ₃ H ₈ %	iC ₄ %	nC ₄ %	iC ₅ %	nC ₅ %	C ₆ + %	MS Date	δ ¹³ C _{CO2} ‰	δ ¹³ C _{C1} ‰	δDC ₁ ‰	δ ¹³ C ₂ ‰	δ ¹³ C ₃ ‰	δ ¹³ C ₄ ‰	δ ¹³ C ₅ ‰	δ ¹³ C ₆ ‰	δ ¹³ C ₇ ‰	Specific Gravity	BTU	Comments		
597313	Peterson Ridge 0780 1-30H	1/25/2017	10:30	2/3/2017	nd	nd	0.0240	0.56	0.008	1.49	nd	97.83	0.0087	0.0002	0.0204	0.0005	0.0047	0.0180	0.0068	0.0072	0.0167	2/14/2017	-50.08	-313.7										0.565	995	
597314	Hebron 0780 2-7H	1/25/2017	11:45	2/3/2017	0.0791	nd	0.0449	0.63	0.53	4.80	nd	91.62	1.18	nd	0.550	nd	0.127	0.203	0.0959	0.0756	0.0630	2/13/2017	-4.71	-56.34	-273.6	-36.51	-32.41	-31.17	-29.03	-27.96	-28.36	0.603	985			
597315	Mutual 0780 4-30H	1/25/2017	14:01	2/3/2017	0.0056	0.0912	0.473	0.80	0.010	42.71	nd	16.80	10.48	0.0003	21.10	0.0006	2.13	4.52	0.481	0.300	0.101	2/12/2017	-54.67	-298.4	-37.16	-32.05	-32.66	-29.70	-27.59	-28.25	1.108	1147				