COLOMBIA ENERGY DEVELOPMENT CO

ANEXO 2. Cromatografía Gas Campo Ramiriquí No. 2

Caracterización estimada del gas

Sampling Date	24 / Oct / 2026 / 08:27 hrs
Sampling Location	Gas Venta
Cylinder Number	CLM - 069
Sample Description	Surtidor # 1
Sampling Conditions	900.0 psig @ 80.0°F
Sample ID	260578G
Analysis Date	27-oct-2026

	Component	Mole %	Weight %
H_2	Hydrogen	0.00	0.00
CO_2	Carbon Dioxide	9.55	18.04
N_2	Nitrogen	0.52	0.62
C_1	Methane	70.39	48.46
C_2	Ethane	10.88	14.05
C_3	Propane	5.52	10.46
iC_4	i-Butane	1.10	2.75
nC_4	n-Butane	1.39	3.46
iC_5	i-Pentane	0.31	0.97
nC_5	n-Pentane	0.20	0.61
C_6	Hexanes	0.09	0.34
C_7	Heptanes	0.04	0.18
C_8	Octanes	0.01	0.06
C_9	Nonanes	0.00	0.00
C_{10}	Decanes	0.00	0.00
C_{11}	Undecanes	0.00	0.00
$C_{12}+$	Dodecanes plus	0.00	0.00
	Totals :	100.00	100.00

Note: 0.00 means less than 0.005.

	Calculated Residue Properties	Mole Weight ($g\ mol^{-1}$)	Density ($g\ cm^{-3}$ at 60°F)
C_{7+}	Heptanes plus	90.0	0.7750
$C_{10}+$	Decanes plus	134.0	0.7780
$C_{12}+$	Dodecanes plus	-	-

Calculated Whole Gas Properties		
Gas Gravity	0.8042	(Air=1 @ 14.73 psia & 60°F)
Whole Sample Mole Weight	23.31	$g\ mol^{-1}$
Ideal Gas Density	0.9801	$kg\ m^{-3}$ @ 14.65psia, 60°F
Ideal Gross Calorific Value	1147.4	BTU.ft-3 @ 14.65psia, 60°F
Ideal Net Calorific Value	1040.8	BTU.ft-3 @ 14.65psia, 60°F
Pseudo Critical Press.	701.6	psia
Pseudo Critical Temp.	415.9	Rankine
Gas Compressibility Factor, Z	0.996299	@ 14.65 psia & 60°F
GPM (80% Propane)	2.2481	Gal/1000 PC
GPM (100% Propane)	2.5504	Gal/1000 PC
Additional Information		
Real Gross Calorific Value	1151.7	BTU.ft-3 @ 14.65psia, 60°F
Real Net Calorific Value	1044.7	BTU.ft-3 @ 14.65psia, 60°F