



# NATURAL GAS ANALYSIS

PRIMARY DB KEY: NAME/DESCRIP: MORRIS 24-4, 24-12, 14-16  
 LEASE #:   
 FIELD/ AREA:   
 PROJECT NO.: 201908133 ANALYSIS NO.: 12  
 COMPANY NAME: RENEGADE OIL & GAS COMPANY ANALYSIS DATE: AUGUST 28, 2019 07:05  
 OFFICE / BRANCH: AURORA, CO SAMPLE DATE: AUGUST 21, 2019  
 CUSTOMER REF: TO:   
 PRODUCER: EFFECTIVE DATE:   
 \*\*\*FIELD DATA\*\*\*

SAMPLE CYCLE: SAMPLE TYPE:   
 SAMPLE PRES.: 11 psig PROBE: NO  
 FLOW PRES.: psig CYLINDER NO.: 1678  
 LAB PRES.: psig SAMPLED BY: CODY BAYLIS  
 SAMPLE TEMP.: 65 °f SAMPLING COMPANY: RENEGADE  
 AMBIENT TEMP.: °f H2S BY STAIN TUBE: .25 ppm  
 H2O BY STAIN TUBE: #/mmcf CO2 BY STAIN TUBE: Mol %  
 FIELD COMMENTS:   
 LAB COMMENTS:

COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.01	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	0.01	-	-
NITROGEN	1.57	-	-
CO2	3.42	-	-
METHANE	56.92	-	-
ETHANE	14.33	3.8339	3.8548
PROPANE	14.35	3.9542	3.9758
ISOBUTANE	1.37	0.4483	0.4507
N-BUTANE	5.06	1.5955	1.6042
ISOPENTANE	1.05	0.3841	0.3862
N-PENTANE	1.22	0.4423	0.4447
HEXANES+	0.69	0.2999	0.3015
TOTAL	100.00	10.9582	11.0179

BTU @ 60 DEG F

	14.65	14.73
GROSS DRY REAL =	1529.8 /scf	1538.2 /scf
GROSS SATURATED REAL =	1503.1 /scf	1511.5 /scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) 0.9576  
 GRAVITY (LB/SCF) 0.07308  
 COMPRESSIBILITY FACTOR : 0.99404

NOTE: REFERENCE GPA 2261(ASTM D1945 & ASME-PTC), 2145, & 2172 CURRENT PUBLICATIONS

Reference: Per GPA 2172-14 sec 9 The C6+ is derived from the following ratios of C6, C7 & C8+ respectively: 60% 30% 10%

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