



ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY: **05-103-10863** NAME/DESCRIP : **PICEANCE CREEK UNIT 297-11A1**
 LEASE #: **INTERMEDIATE CASING**
 FIELD/AREA:
 PROJECT NO. : **202411074** ANALYSIS NO. : **02**
 COMPANY NAME : **QB ENERGY OPERATING, LLC** ANALYSIS DATE: **DECEMBER 13, 2024 00:00**
 OFFICE / BRANCH: **PARACHUTE, CO** SAMPLE DATE : **NOVEMBER 19, 2024 12:25**
 CUSTOMER REF: **TO:**
 PRODUCER : **QB ENERGY OPERATING, LLC** EFFECTIVE DATE:

*****FIELD DATA*****

SAMPLE CYCLE: SAMPLE TYPE: **SPOT**
 SAMPLE PRES. : 210 psig PROBE :
 FLOW PRES. : psig CYLINDER NO. : **ECA-764**
 LAB PRES: psig SAMPLED BY : **ANDREW TERRAZAS**
 SAMPLE TEMP. : 29 °f SAMPLING COMPANY: **QB ENERGY**
 AMBIENT TEMP.: °f H2S BY STAIN TUBE: **-** ppm mol
 H2O BY STAIN TUBE: **-** #/mmcf CO2 BY STAIN TUBE: **-** Mol %
 FIELD COMMENTS:
 LAB COMMENTS:

COMPONENTS	NORM. MOLE%	GPM @ 14.65	d13C ‰ VPDB	dD ‰ VSMOW
HELIUM	0.02	-	-	-
HYDROGEN	0.01	-	-	-
OXYGEN/ARGON	0.00	-	-	-
NITROGEN	0.50	-	-	-
CO2	0.19	-	-8.6	-
METHANE	93.92	-	-37.2	-169
ETHANE	3.18	0.8473	-25.1	-
PROPANE	1.19	0.3267	-27.1	-
ISOBUTANE	0.20	0.0689	-25.3	-
N-BUTANE	0.35	0.1129	-27.3	-
ISOPENTANE	0.11	0.0400	-24.2	-
N-PENTANE	0.10	0.0360	-26.9	-
HEXANES+	0.22	0.1169	-	-
TOTAL	100.00	1.5487		

BTU @ 60 DEG F

14.65
 GROSS DRY REAL = 1074.0 /scf
 GROSS SATURATED REAL = 1055.2 /scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) 0.604
 GRAVITY (LB/SCF) 0.04610
 COMPRESSIBILITY FACTOR : 0.99770

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%**

The NG Composition File #: **202411074-02-A-292**
 The Isotopic Data File #: **DIG-038356**

Note: Stable isotope results based on multi-point laboratory calibration

Precision δ¹³C < 0.5 ‰ Precision δD < 5.0 ‰

Values in red represent low peak heights. Interpret with caution.

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