



ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY: **05-045-21942** NAME/DESCRIP : **300108685 J6SEB 6-12DD**
 LEASE #: **COC-55972E** CASING
 FIELD/AREA: **MAMM CREEK**

PROJECT NO. : **202511013** ANALYSIS NO. : **02**
 COMPANY NAME : **QB ENERGY OPERATING, LLC** ANALYSIS DATE: **NOVEMBER 18, 2025 00:00**
 OFFICE / BRANCH: **PARACHUTE, CO** SAMPLE DATE : **OCTOBER 15, 2025**
 CUSTOMER REF: TO:
 PRODUCER : **QB ENERGY OPERATING LLC** EFFECTIVE DATE:

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

SAMPLE CYCLE: SAMPLE TYPE: **SPOT**
 SAMPLE PRES. : **800** psig PROBE : **NO**
 FLOW PRES. : psig CYLINDER NO. : **TBI/CO-593**
 LAB PRES: psig SAMPLED BY : **MIKE KELLEY**
 SAMPLE TEMP. : **57** °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: **Low sample volume.**

COMPONENTS	NORM. MOLE%	GPM @ 14.65	d13C % VPDB	dD % VSMOW
HELIUM	0.00	-	-	-
HYDROGEN	0.00	-	-	-
OXYGEN/ARGON	1.25	-	-	-
NITROGEN	4.76	-	-	-
CO2	2.73	-	-5.9	-
METHANE	85.33	-	-37.2	-163
ETHANE	3.89	1.0370	-27.8	-
PROPANE	1.08	0.2967	-25.4	-
ISOBUTANE	0.24	0.0779	-26.1	-
N-BUTANE	0.22	0.0659	-24.7	-
ISOPENTANE	0.11	0.0360	-25.2	-
N-PENTANE	0.06	0.0220	0.0	-
HEXANES+	0.34	0.1429	-	-
TOTAL	100.00	1.6784		

BTU @ 60 DEG F

14.65
 GROSS DRY REAL = **995.2** /scf
 GROSS SATURATED REAL = **977.8** /scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) **0.6544**
 GRAVITY (LB/SCF) **0.04995**
 COMPRESSIBILITY FACTOR : **0.99780**

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 #: **202511013-02-A-563**
 The Isotopic Data File #: **DIG-042225**

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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