



ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY: **05-045-09947** NAME/DESCRIP : **M27NW GMR 28-16D**
 LEASE #: **05-045-09947** SURFACE CASING
 FIELD/AREA: **MAMM CREEK**

PROJECT NO. : **202601073** ANALYSIS NO. : **02**
 COMPANY NAME : **QB ENERGY OPERATING, LLC** ANALYSIS DATE: **JANUARY 30, 2026 00:00**
 OFFICE / BRANCH: **PARACHUTE, CO** SAMPLE DATE : **JANUARY 14, 2026 9:29**
 CUSTOMER REF: TO:
 PRODUCER : **QB ENERGY OPERATING, LLC** EFFECTIVE DATE:

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

SAMPLE CYCLE: SAMPLE TYPE:
 SAMPLE PRES. : 236 psig PROBE :
 FLOW PRES. : psig CYLINDER NO. : ECA-733
 LAB PRES: psig SAMPLED BY : ERIC CHARLESWORTH
 SAMPLE TEMP. : 30 °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	0.11	-	-	-
HYDROGEN	0.01	-	-	-
OXYGEN/ARGON	0.03	-	-	-
NITROGEN	6.35	-	-	-
CO2	0.04	-	0.0	-
METHANE	90.18	-	-35.8	-169
ETHANE	2.40	0.6423	-25.8	-
PROPANE	0.54	0.1478	-23.6	-
ISOBUTANE	0.11	0.0360	-23.0	-
N-BUTANE	0.09	0.0280	-23.2	-
ISOPENTANE	0.03	0.0110	0.0	-
N-PENTANE	0.02	0.0070	0.0	-
HEXANES+	0.08	0.0300	-	-
TOTAL	100.00	0.9021		

BTU @ 60 DEG F

14.65
 GROSS DRY REAL = 978.2 /scf
 GROSS SATURATED REAL = 961.1 /scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) 0.6027
 GRAVITY (LB/SCF) 0.04600
 COMPRESSIBILITY FACTOR : 0.99800

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 #: **202601073-02-A-621**
 The Isotopic Data File #: **DIG-042671**

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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