



ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY: **05-045-11718** NAME/DESCRIP : **D27 EF12B-22**
 LEASE #: **110165700** CASING
 FIELD/AREA:
 PROJECT NO. : **202409055** ANALYSIS NO. : **05**
 COMPANY NAME : **QB ENERGY OPERATING, LLC** ANALYSIS DATE: **SEPTEMBER 24, 2024 00:00**
 OFFICE / BRANCH: **PARACHUTE, CO** SAMPLE DATE : **SEPTEMBER 4, 2024 9:30**
 CUSTOMER REF: TO:
 PRODUCER : **QB ENERGY OPERATING, LLC** EFFECTIVE DATE:

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

SAMPLE CYCLE: SAMPLE TYPE: **SPOT**
 SAMPLE PRES. : 271 psig PROBE : **NO**
 FLOW PRES. : psig CYLINDER NO. : **ECA-769**
 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:

COMPONENTS	NORM. MOLE%	GPM @ 14.65	d13C ‰ VPDB	dD ‰ VSMOW
HELIUM	0.00	-	-	-
HYDROGEN	0.01	-	-	-
OXYGEN/ARGON	0.00	-	-	-
NITROGEN	0.09	-	-	-
CO2	2.30	-	-5.0	-
METHANE	90.44	-	-36.4	-166
ETHANE	5.05	1.3432	-25.6	-
PROPANE	1.05	0.2888	-22.6	-
ISOBUTANE	0.33	0.1079	-22.7	-
N-BUTANE	0.21	0.0630	-22.8	-
ISOPENTANE	0.13	0.0440	-22.4	-
N-PENTANE	0.06	0.0220	-24.6	-
HEXANES+	0.33	0.1949	-	-
TOTAL	100.00	2.0638		

BTU @ 60 DEG F

14.65
 GROSS DRY REAL = 1074.9 /scf
 GROSS SATURATED REAL = 1056.1 /scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) 0.6341
 GRAVITY (LB/SCF) 0.04840
 COMPRESSIBILITY FACTOR : 0.99750

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 #: **202409055-05-A-232**
 The Isotopic Data File #: **DIG-037072**

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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