



ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY: **05-103-10975** NAME/DESCRIP : **YELLOW CREEK FEDERAL 2-22-1**
 LEASE #: **PRODUCTION CASING**
 FIELD/AREA:
 PROJECT NO. : **202502021** ANALYSIS NO. : **02**
 COMPANY NAME : **QB ENERGY OPERATING, LLC** ANALYSIS DATE: **FEBRUARY 18, 2025 00:00**
 OFFICE / BRANCH: **PARACHUTE, CO** SAMPLE DATE : **JANUARY 29, 2025 15:00**
 CUSTOMER REF: **TO:**
 PRODUCER : **QB ENERGY OPERATING, LLC** EFFECTIVE DATE:

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

SAMPLE CYCLE: SAMPLE TYPE: **SPOT**
 SAMPLE PRES. : 1953 psig PROBE :
 FLOW PRES. : psig CYLINDER NO. : **ECA-709**
 LAB PRES: psig SAMPLED BY : **NICK CROY**
 SAMPLE TEMP. : 25 °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	0.01	-	-	-
HYDROGEN	0.03	-	-	-
OXYGEN/ARGON	0.00	-	-	-
NITROGEN	0.18	-	-	-
CO2	3.21	-	-4.9	-
METHANE	86.08	-	-38.4	-179
ETHANE	5.72	1.3821	-27.0	-
PROPANE	1.87	0.4640	-25.3	-
ISOBUTANE	0.52	0.1530	-25.0	-
N-BUTANE	0.55	0.1570	-24.8	-
ISOPENTANE	0.35	0.1090	-25.0	-
N-PENTANE	0.27	0.0870	-24.5	-
HEXANES+	1.21	4.5063	-	-
TOTAL	100.00	6.8584		

BTU @ 60 DEG F

14.65
 GROSS DRY REAL = 1510.3 /scf
 GROSS SATURATED REAL = 1483.9 /scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) 0.9257
 GRAVITY (LB/SCF) 0.07066
 COMPRESSIBILITY FACTOR : 0.99680

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 #: **202502021-02-A-359**
 The Isotopic Data File #: **DIG-038886**

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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