



ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY:	05-045-21942	NAME/DESCRIP :	300108685 J6SEB 6-12DD
LEASE #:	COC-55972E		BRADEN HEAD
FIELD/AREA:	MAMM CREEK		
PROJECT NO. :	202511013	ANALYSIS NO. :	01
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. :	378 psig	PROBE :	NO
FLOW PRES. :	psig	CYLINDER NO. :	ECA-728
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	0.02	-	-	-
HYDROGEN	0.00	-	-	-
OXYGEN/ARGON	0.00	-	-	-
NITROGEN	0.77	-	-	-
CO2	2.29	-	-6.8	-
METHANE	92.23	-	-37.0	-169
ETHANE	3.24	0.8633	-27.6	-
PROPANE	0.79	0.2168	-26.0	-
ISOBUTANE	0.17	0.0550	-26.5	-
N-BUTANE	0.15	0.0470	-25.4	-
ISOPENTANE	0.07	0.0260	-25.8	-
N-PENTANE	0.04	0.0140	-26.0	-
HEXANES+	0.22	0.1299	-	-
TOTAL	100.00	1.3520		

BTU @ 60 DEG F

	14.65	
GROSS DRY REAL =	1037.4	/scf
GROSS SATURATED REAL =	1019.3	/scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F)	0.6169
GRAVITY (LB/SCF)	0.04710
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 #: **202511013-01-A-563**
 The Isotopic Data File #: **DIG-042224**

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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