EMPACT

ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY:	**05-103-10519**	NAME/DESCRIP :	**FF UNIT 8010D J11 498**
LEASE #:			**SURFACE CASING**
FIELD/AREA:			
PROJECT NO. :	**202509082**	ANALYSIS NO. :	**02**
COMPANY NAME :	**QB ENERGY OPERATING, LLC**	ANALYSIS DATE:	OCTOBER 01, 2025 00:00
OFFICE / BRANCH:	PARACHUTE, CO	SAMPLE DATE :	SEPTEMBER 11, 2025
CUSTOMER REF:		TO:	
PRODUCER :		EFFECTIVE DATE:	
FIELD DATA			
SAMPLE CYCLE:		SAMPLE TYPE:	
SAMPLE PRES. :	psig	PROBE :	
FLOW PRES. :	psig	CYLINDER NO. :	1105
LAB PRES:	psig	SAMPLED BY :	NICK CROY
SAMPLE TEMP. :	ºf	SAMPLING COMPANY:	QB ENERGY
AMBIENT TEMP.:	ºf	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	0.01	-	-	-
OXYGEN/ARGON	0.01	-	-	-
NITROGEN	0.60	-	-	-
CO2	0.40	-	-10.7	-
METHANE	93.27	-	-37.6	-187
ETHANE	2.64	0.7035	-26.0	-
PROPANE	1.31	0.3597	-26.0	-
ISOBUTANE	0.30	0.0979	-27.6	-
N-BUTANE	0.49	0.1539	-27.4	-
ISOPENTANE	0.22	0.0769	-24.9	-
N-PENTANE	0.20	0.0719	-26.9	-
HEXANES+	0.53	0.2118	-	-
TOTAL	100.00	1.6756		

BTU @ 60 DEG F	**14.65**	
GROSS DRY REAL =	1088.8	**/scf**
GROSS SATURATED REAL =	1069.8	**/scf**

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F)	0.618
GRAVITY (LB/SCF)	0.04717
COMPRESSIBILITY FACTOR :	0.99760

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 #: **202509082-02-A-526**
The Isotopic Data File #: **DIG-041603**

Note:Stable isotope results based on multi-point laboratory calibration
Presicion $\delta^{13}C$ < 0.5 ‰ **Precision δD < 5.0 ‰**
Values in red represent low peak heights. Interpret with caution.