EMPACT

ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY:	**05-103-10810**	NAME/DESCRIP :	**PCU 297-15A2**
LEASE #:			**PRODUCTION CSG**
FIELD/AREA:			

PROJECT NO. :	**202505078**	ANALYSIS NO. :	**01**
COMPANY NAME :	**QB ENERGY OPERATING, LLC**	ANALYSIS DATE:	MAY 23, 2025 00:00
OFFICE / BRANCH:	PARACHUTE, CO	SAMPLE DATE :	MAY 2, 2025
CUSTOMER REF:		TO:	
PRODUCER :	QB ENERGY OPERATING LLC	EFFECTIVE DATE:	

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

SAMPLE CYCLE:			SAMPLE TYPE:	
SAMPLE PRES. :	402	psig	PROBE :	
FLOW PRES. :		psig	CYLINDER NO. :	ECA-762
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	0.00	-	-	-
HYDROGEN	7.07	-	-	-
OXYGEN/ARGON	0.86	-	-	-
NITROGEN	3.26	-	-	-
CO2	0.21	-	0.0	-
METHANE	80.78	-	-38.0	-176
ETHANE	4.96	1.3216	-25.8	-
PROPANE	1.46	0.4006	-24.0	-
ISOBUTANE	0.35	0.1109	-24.5	-
N-BUTANE	0.32	0.0969	-23.7	-
ISOPENTANE	0.17	0.0579	0.0	-
N-PENTANE	0.12	0.0430	0.0	-
HEXANES+	0.45	0.1768	-	-
TOTAL	100.00	2.2077		

BTU @ 60 DEG F		**14.65**	
	GROSS DRY REAL =	1016.2	**/scf**
	GROSS SATURATED REAL =	998.4	**/scf**

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F)	0.6038
GRAVITY (LB/SCF)	0.04608
COMPRESSIBILITY FACTOR :	0.99790

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 #: **202505078-01-A-423**
The Isotopic Data File #: **DIG-039755**

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.

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