EMPACT

ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY:	**05-103-10457**	NAME/DESCRIP :	**PCU T78X-12G3**
LEASE #:			**SURFACE CSG**
FIELD/AREA:			

PROJECT NO. :	**202505076**	ANALYSIS NO. :	**02**
COMPANY NAME :	**QB ENERGY OPERATING, LLC**	ANALYSIS DATE:	MAY 22, 2025 00:00
OFFICE / BRANCH:	PARACHUTE, CO	SAMPLE DATE :	MAY 1, 2025
CUSTOMER REF:		TO:	
PRODUCER :	QB ENERGY OPERATING LLC	EFFECTIVE DATE:	

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

SAMPLE CYCLE:			SAMPLE TYPE:	
SAMPLE PRES. :	769	psig	PROBE :	
FLOW PRES. :		psig	CYLINDER NO. :	ECA-816
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	0.00	-	-	-
OXYGEN/ARGON	0.00	-	-	-
NITROGEN	0.06	-	-	-
CO2	4.76	-	-2.9	-
METHANE	88.18	-	-36.7	-176
ETHANE	4.80	1.2792	-25.6	-
PROPANE	1.18	0.3238	-23.5	-
ISOBUTANE	0.30	0.0979	-24.1	-
N-BUTANE	0.24	0.0750	-23.9	-
ISOPENTANE	0.13	0.0440	0.0	-
N-PENTANE	0.07	0.0290	0.0	-
HEXANES+	0.28	0.1429	-	-
TOTAL	100.00	1.9918		

BTU @ 60 DEG F		**14.65**	
	GROSS DRY REAL =	1046.4	**/scf**
	GROSS SATURATED REAL =	1028.1	**/scf**

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F)	0.6553
GRAVITY (LB/SCF)	0.05001
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 #: **202505076-02-A-423**
The Isotopic Data File #: **DIG-039752**

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.

The data presented herein has been acquired by means of current analytical techniques and represents the judicious conclusion EMPACT Analytical Systems, Inc. Results of the analysis can be affected by the sampling conditions, therefore, are only warranted through proper lab protocol. EMPACT assumes no responsibility for interpretation or any consequences from application of the reported information and is the sole liability of the user. The reproduction in any media of this reported information may not be made, in portion or as a whole, without the written permission of EMPACT Analytical Systems, Inc.