



ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY: **05-103-10690** NAME/DESCRIP : **FREEDOM UNIT 297-28A5**
 LEASE #: **120193068** **PRODUCTION CASING**
 FIELD/AREA: **PICEANCE CREEK - #68800**

PROJECT NO. : **202405126** ANALYSIS NO. : **01**
 COMPANY NAME : **CAERUS OIL & GAS LLC** ANALYSIS DATE: **JUNE 07, 2024 00:00**
 OFFICE / BRANCH: **PARACHUTE, CO** SAMPLE DATE : **MAY 15, 2024 12:45**
 CUSTOMER REF: TO: **MAY 15, 2024 12:48**
 PRODUCER : **CAERUS PICEANCE LLC** EFFECTIVE DATE:

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

SAMPLE CYCLE: SAMPLE TYPE: **SPOT**
 SAMPLE PRES. : 140 psig PROBE :
 FLOW PRES. : psig CYLINDER NO. : **ECA-817**
 LAB PRES: psig SAMPLED BY : **PAUL HACKING**
 SAMPLE TEMP. : 66 °f SAMPLING COMPANY: **CAERUS OIL & GAS**
 AMBIENT TEMP.: °f H2S BY STAIN TUBE: **-** ppm mol
 H2O BY STAIN TUBE: **-** #/mmcf CO2 BY STAIN TUBE: **-** Mol %
 FIELD COMMENTS:
 LAB COMMENTS: **Possible moisture in sample; possible trace of Olefins in sample.**

COMPONENTS	NORM. MOLE%	GPM @ 14.65	d13C % VPDB	dD % VSMOW
HELIUM	0.01	-	-	-
HYDROGEN	0.01	-	-	-
OXYGEN/ARGON	0.00	-	-	-
NITROGEN	0.06	-	-	-
CO2	7.09	-	-1.7	-
METHANE	87.95	-	-39.2	-188
ETHANE	4.09	1.0871	-22.2	-
PROPANE	0.34	0.0929	-19.0	-
ISOBUTANE	0.11	0.0360	-16.6	-
N-BUTANE	0.04	0.0130	0.0	-
ISOPENTANE	0.02	0.0070	0.0	-
N-PENTANE	0.01	0.0040	0.0	-
HEXANES+	0.27	0.2288	-	-
TOTAL	100.00	1.4688		

BTU @ 60 DEG F

14.65
 GROSS DRY REAL = 999.3 /scf
 GROSS SATURATED REAL = 981.8 /scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) 0.6623
 GRAVITY (LB/SCF) 0.05054
 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 #: **202405126-01-A-154**
 The Isotopic Data File #: **DIG-035721**

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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