



NATURAL GAS ANALYSIS

PRIMARY DB KEY: **05-001-06251** NAME/DESCRIP : **GUTHRIE ABNER #1**
 LEASE #: **05-001-06251** **SEEPAGE AROUND WELL**
 FIELD/AREA:
 PROJECT NO. : **202008120** ANALYSIS NO. : **01**
 COMPANY NAME : **PROVIDENCE ENERGY, LLC** ANALYSIS DATE: **AUGUST 28, 2020 11:44**
 OFFICE / BRANCH: **DALLAS, TX** SAMPLE DATE : **AUGUST 25, 2020**
 CUSTOMER REF: TO:
 PRODUCER : **POCO OPERATING** EFFECTIVE DATE:

FIELD DATA

SAMPLE CYCLE: SAMPLE TYPE: SPOT
 SAMPLE PRES. : psig CYLINDER NO. : PLASTIC
 LAB PRES: psig SAMPLED BY : GREG THORLAKSEN
 SAMPLE TEMP. : °f SAMPLING COMPANY: POCO
 AMBIENT TEMP.: °f H2S BY STAIN TUBE: - ppm
 H2O BY STAIN TUBE: - #/mmcf CO2 BY STAIN TUBE: - Mol %

FIELD COMMENTS: *After nearby Frac*
 LAB COMMENTS: *Headspace gas analysis from sample of soil seepage.*
****Sample contained air and normalized mole percents were adjusted**

COMPONENTS	NORM. MOLE%	AIR ADJ. MOLE%
HELIUM	0.00	0.00
HYDROGEN	0.00	0.00
OXYGEN/ARGON	20.62	0.00
NITROGEN	77.52	68.21
CO2	0.06	0.52
METHANE	0.05	0.82
ETHANE	0.08	1.39
PROPANE	0.23	4.00
ISOBUTANE	0.07	1.22
N-BUTANE	0.30	5.22
ISOPENTANE	0.13	2.26
N-PENTANE	0.18	3.13
HEXANES+	0.76	13.22
TOTAL	100.00	99.99
BTU @ 60 DEG F	14.73	14.73
GROSS DRY REAL =	71.4 /scf	1300.0 /scf
GROSS SATURATED REAL =	70.2 /scf	1277.4 /scf
RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F)	1.0227	1.4364
COMPRESSIBILITY FACTOR :	0.99950	0.95414

PRE AIR ADJUSTMENT RATIOS:	C1/C2	C1/C3	C2/C3
	0.6	0.2	0.3

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%

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