



ANALYTICAL LABORATORY, INC.

424 Greenwood • Wichita, Kansas 67211 • (316) 269-4200

EXTENDED NATURAL GAS ANALYSIS

COMPANY NAME: John O. Farmer, Inc.

Lab #: 9931323

Sample I.D.: Patterson 1-33

SETT#: Morrow gas

COUNTY: Haskell

LEGAL LOCATION: 33-30S-31W

DATE SAMPLED: n/a

SAMPLER: Schmidt

SAMPLE PRESSURE: 80

TEMPERATURE (F): n/a

DATE ANALYZED: 10/1/99

QUALITY CONTROL DATE: 10/1/99

ANALYSIS

CALCULATED AT 14.650 PSIA, 60 F, NORMALIZED

COMPONENT	MOLAL %	BTU AMOUNT	GPM
METHANE	79.8	801.44	
ETHANE	5.05	89.09	1.34
PROPANE	3.4	85.28	0.93
ISOBUTANE	0.5	16.21	0.16
NORMAL BUTANE	0.91	29.59	0.29
ISOPENTANE	0.22	8.77	0.08
NORMAL PENTANE	0.26	10.39	0.09
HEXANES+	0.41	20.7	0.18
NITROGEN	9.12		
OXYGEN	0		
CARBON DIOXIDE	0.32		
HELIUM	0.21		
HYDROGEN	0		
TOTALS	100	1061.5	3.07

BTU/FT³ DRY (IDEAL GROSS): 1061.5BTU/FT³ SATURATED (IDEAL GROSS): 1043.77BTU/FT³ DRY (REAL GROSS): 1064.3BTU/FT³ SATURATED (REAL GROSS): 1046.5

SPECIFIC GRAVITY: 0.6818

COMPRESSIBILITY: 0.9974

GPM: 3.07

RESPECTFULLY SUBMITTED

PRIORITY ANALYTICAL LAB

Hexanes + parameters: BTU (dry)=5085.8; S.G.=3.1765; Summation factor=.0881, at 14.688 psia.

Analyzed and calculated by: Modified GPA 2281-90, 2145-94 & 2172-88.