EMPACT

NATURAL GAS ANALYSIS

PRIMARY DB KEY: NAME/DESCRIP : **JOHN CRAIG 4-2**
LEASE #:

PROJECT NO. :	**201709096**	ANALYSIS NO. :	**01**
COMPANY NAME :	**NIGHTHAWK PRODUCTION COMPANY**	ANALYSIS DATE:	SEPTEMBER 25, 2017 12:34
OFFICE / BRANCH:	HIGHLANDS RANCH, CO	SAMPLE DATE :	SEPTEMBER 22, 2017 13:15
CUSTOMER REF:		TO:	
PRODUCER :		EFFECTIVE DATE:	
*****FIELD DATA*****			
SAMPLE CYCLE:		SAMPLE TYPE:	SPOT
SAMPLE PRES. :	20 psig	PROBE :	NO
FLOW PRES. :	psig	CYLINDER NO. :	1054
LAB PRES:	psig	SAMPLED BY :	JOHN MOSER
SAMPLE TEMP. :	84.4 °f	SAMPLING COMPANY:	EMPACT
AMBIENT TEMP.:	°f	H2S BY STAIN TUBE:	**0.3** ppm
H2O BY STAIN TUBE	- #/mmcf	CO2 BY STAIN TUBE	- Mol %
FIELD COMMENTS:			
LAB COMMENTS:			

COMPONENTS	NORM. MOLE%	GPM @ 14.73	GPM @ 14.65
HELIUM	0.18	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	0.06	-	-
NITROGEN	15.86	-	-
CO2	1.31	-	-
METHANE	39.20	-	-
ETHANE	14.83	3.9888	3.9672
PROPANE	18.22	5.0486	5.0212
ISOBUTANE	2.30	0.7572	0.7531
N-BUTANE	5.03	1.5951	1.5865
ISOPENTANE	0.96	0.3529	0.3510
N-PENTANE	0.91	0.3317	0.3299
HEXANES+	1.14	0.4971	0.4944
TOTAL	100.00	12.5714	12.5033

BTU @ 60 DEG F	**14.73**		**14.65**	
GROSS DRY REAL =	1501.3	**/scf**	1493.1	**/scf**
GROSS SATURATED REAL =	1475.2	**/scf**	1467.0	**/scf**

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F)	1.0531
GRAVITY (LB/SCF)	0.08037
COMPRESSIBILITY FACTOR :	0.99406

NOTE: REFERENCE GPA 2261(ASTM D1945 & ASME-PTC), 2145, & 2172 CURRENT PUBLICATIONS

Reference: Per GPA 2261 sec 7.3.6 ***The C6+ is derived from the following ratios of C6, C7 & C8+ respectively:*** **60% 30% 10%**

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