RECEIVED

COMMONWEALTH OF KENTUCKY

JUN 6 2016

PUBLIC SERVICE COMMISSION

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of

AN INVESTIGATION OF THE GAS COSTS OF)	CASE NO.
B&H GAS COMPANY PURSUANT TO KRS)	2015-00367
278.2207 AND THE WHOLESALE GAS PRICE IT)	
IS CHARGED BY ITS AFFILIATE, B&S OIL AND)	
GAS COMPANY, PURSUANT TO KRS 278.274)	

JOINT RESPONSE TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION TO B&H GAS COMPANY AND B&S OIL AND GAS COMPANY

Comes B&H Gas Company ("B&H"), and B&S Oil and Gas Company ("B&S"), by and through Bud Rife, President of each entity, and hereby submit their Joint Response to Commission Staff's Second Request for Information.

B&H and B&S herein respectfully answer these questions to the best of their abilities. As the Commission aware, the office shared by B&H and B&S suffered two fires in December, 2014 and January, 2015, respectively, and unfortunately many of the companies' records were destroyed. The following reflects B&H and B&S's best efforts to answer the Commission's questions. B&H and B&S will, where possible, supplement and/or amend their responses to these questions with additional information or documents.

1. Refer to the response to Commission Staff's First Request for Information, Item 3, which, in support of the statement, "The \$9.38 Mcf contract price is reflective of market price," refers to (1) the higher BTU content of the gas provided B&H's customers, (2) that the gas is being delivered at a higher pressure than is typical for gas companies, and (3) that B&S

is the only supplier that can provide gas at each delivery point necessary to service B&H customers.

- a. Explain how the pressure at which gas is delivered affects price and how that causes the \$9.38 per Mcf contract price to be "reflective of market price."
- b. Explain how B&S's being the only supplier that can provide gas at each delivery point necessary to service B&H customers causes the \$9.38 per Mcf price contract price to be "reflective of market price."

RESPONSE TO REQUEST NO. 1:

- a. See Charles' Gas Law and Boyle's Law;
- b. No other gas provider is willing to operate the lines maintained and operated by B&S, due to the maintenance and upkeep costs required to provide service to these rural customers. The overhead for service to B&H customers is greater than other service providers in other areas, and B&S rates are competitive and reflective of market price for gas for similarly situated producers. For example, B&S has to go to its wells daily in winter months to keep the pressure at 10 psi.
- 2. Refer to the response to the Initial Request for Information of the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention, ("AG's First Request"), Item 26, in which the last sentence reads, "Respondent cannot recall the specific amount of the loan/grant, but believes it to be between \$300,000,000-\$400,000,000, and has no information about any outstanding amounts." Confirm whether the loan to which the response refers is the "Other Long- Term Debt" which has been included in B&H's annual reports filed with the Commission since 1995 and for which the balance has

been shown as \$405,761 since 2004.

RESPONSE TO REQUEST NO. 2: The \$405,761 identified as "Other Long Term Debt" identified on B&H's annual reports is a reference to B&H's loan from the Department of Local Government. The Department of Local Government has never sought repayment of this loan, and it is unclear to B&H whether this loan was converted to a grant, and/or otherwise abandoned by the Department of Local Government, which no longer exists. Upon information and belief other small utilities who received loans from the Department of Local Government had their loans converted to grants or otherwise

- 3. Refer to the response to the AG's First Request, Item 32.c., which repeats an earlier response provided to Staff's First Request, Item 2. in stating that "B&H has the lowest rates in the area."
 - a. Define "the area" as used in the aforementioned response.
- b. Identify the Kentucky jurisdictional local gas distribution companies whose rates B&H compared to its rates in reaching the conclusion that it has the lowest rates in the area.

RESPONSE TO REQUEST NO. 3:

- a. "Area" refers generally to Floyd and surrounding counties in eastern

 Kentucky:
- b. Columbia Gas and EQT.
- 4. Refer to the response to the AG's First Request, Item 34.a., and Exhibit D to the response, which contains seven pages numbered 4-10 that appear to be pages from a document prepared for B&H by Southern Hydrocarbon Corporation ("SHC").
 - a. Provide the first three pages of the SHC document.

- b. Pages 4-5 and 7-1O appear to reflect the results of tests of specific wells taken on April 4, 2016, or April 11, 2016. Explain what is represented by the information shown on page 6 from the four samples apparently taken on April 2.2016.
- c. Pages 4-5, which identify the well/sites to be Betsy Layne Shop and Mare Creek Shop, respectively, have "Blend" written on the line on which the well/site is identified. Pages 7-10 contain the same type of information as pages 4-5 for the well/sites Booker, Mare Creek, Betsy Layne, and Ivel, but do not have "Blend" written on them. Explain what "Blend" represents and why it is on only some of the pages.

RESPONSE TO REQUEST NO. 4:

- a. B&H does not see the pagination identified on AG's First Request, Item 34.a., and Exhibit D, however, the entirety of the Southern Hydrocarbon Corporation tests are attached hereto as **EXHIBIT A**.
- b. The four samples identified as being taken from Mare Creek, Booker,

 Betsy Lane, and Ivel identify that there were none of the carcinogenic
 gasses tested for, including hydrogen sulfide, were detected in B&H's
 gas.
- c. Bud Rife wrote "Blend" on the Betsy Layne Shop and Mare Creek Shop test results because samples at these sites were taken from the transmission line, representing a blend of natural gas from multiple well sources. The Booker, Mare Creek, Betsy Layne, and Ivel test samples were taken directly at the wells, and the results for these represent the BTU content for those specific well sites.

Dated this the 3rd day of June, 2016.

Respectfully submitted,

JOE F. CHILDERS

JOE F. CHILDERS & ASSOCIATES

The Lexington Building 201 West Short Street

Suite 300

Lexington, Kentucky 40507

Telephone: (859) 253-9824 Facsimile: (859) 258-9288

childerslaw81@gmail.com

VERIFICATION

I have read the foregoing questions and responses and state that the responses are accurate to the best of my knowledge.

BUD RIFÉ

PRESIDENT, B&H GAS COMPANY

PRESIDENT, B&S OIL & GAS

COMPANY

COMMONWEALTH OF KENTUCKY)
COUNTY OF FLOYD)

Subscribed, sworn to, and acknowledged before my by Bud Rife on this the 3rd day of June, 2016.

My Commission Expires: 0//4/18

NOTARY PUBLIC, STATE AT LARGE

NOTARY ID NO: 50369/

Respectfully submitted,

JOE F. CHILDERS & ASSOCIATES The Lexington Building 201 West Short Street Suite 300 Lexington, Kentucky 40507 Telephone: (859) 253-9824 Facsimile: (859) 258-9288 childerslaw81@gmail.com **VERIFICATION** I have read the foregoing questions and responses and state that the responses are **BUD RIFE** PRESIDENT, B&H GAS COMPANY PRESIDENT, B&S OIL & GAS **COMPANY** Subscribed, sworn to, and acknowledged before my by Bud Rife on this the ____ day of My Commission Expires: NOTARY PUBLIC, STATE AT LARGE NOTARY ID NO: ___

accurate to the best of my knowledge.

COMMONWEALTH OF KENTUCKY

)

COUNTY OF FLOYD

June, 2016.

CERTIFICATE OF SERVICE

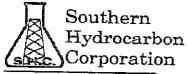
I hereby certify that a true copy of the foregoing notice has been served on the Attorney

General by mailing the same to:

Larry Cook, Esq.
Rebecca W Goodman, Esq.
Assistant Attorneys General
Office of the Attorney General Utility & Rate
1024 Capital Center Drive
Suite 200
Frankfort, Kentucky 40601-8204

On this the 3rd day of June, 2016.

OP F. CHILDERS



CES & PRODUCTS

934 Little Coal River, Suite B Alum Creek, West Virginia 25003 Phone: (304) 756-3171 • Fax (304) 756-1364

Chandler Engineering Co. Model 292/2920 STU Analyzer

Test time: Apr.11 16 16:31 Test #:3046

Calibration #: Location No. :3

		andard/Dr		is	Saturate	ed/Wet Ar	alveie
Methane	Mole% 76.683		R.Den.*	GPM**	MoleX		R.Den.*
Ethane	14.138	776.30 250.78	0.4247 0.1468	3.7785	75.348	762.80	0.4173
Propane	5.027	126.77	0.0765	1.3840	13.892 4.939	246.41 124.57	0.1442
i-Butane	0.482	15.72	0.0097	0.1577	0.474	15.44	0.0095
n-Butane i-Pentane	1.198 0.232	38.84 9.32	0.0238	0.3744	1.167	38.16	0.0234
n-Pentane	0.253	10.18	0.0058 0.0063	0.0851 0.0918	0.228 0.249	9.16	0.0057
(C6+)	0.379	19.23	0,0120	0.1631	0.372	10.00 18.89	0.0062
Moisture Nitrogen	0.000	0.00	0.0000		1.740	0.88	0.0108
(CO2)	1.472 0.146	0.00	0.0142		1.446	0.00	0.0140
2	V • 7 40	0.00	0.0022		0.144	0.00	0.0022

Ideal 100,00 1247.1 0.7222 6.0346

* : Uncorrected for compressibility at 60.0F & 14.730PSIA.

**: Liquid Volume reported at 60.0F.

Standard/Dry Analysis Saturated/Wet Analysis Molar Mass 20.915 = 20.865 Relative Density = 0.7245 0.7228 Compressibility Factor = 0.9964 0.9963 Gross Heating Value 22576. Btu/1b 22252. Btu/16 Gross Heating Value 1251.6 Btu/CF 1230.8 Btu/CF

Absolute Gas Density 55.4416 lbm/1000CF 55.3126 | 1bm/1000EF

Wobbe Index 1446.08

Unnormalized Total: 98.804

Last Calibrated with Calgas of 1056.4 Btu/CF Apr.11 16:09:33

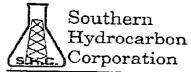
C6+ Last Update: GPA 2261-90.

C6+ BTU/CF 5065.8. C6+ 15m/Gal 5.64250, and C6+ Mol.Wt.

DISCLAIMER

All analysis are based solely on samples and materials supplied to Southern Hydrocarbon Corporation by the client, Southern Hydrocarbon Corporation, it's officers and employees assume no responsibility for and make no warranty as to the productivity, proper operations, or profitability of any gas well or well or other operations or facilities in connection with which these analysis are relied upon. Southern Hydrocarbon Corporation makes no warranty as to the accuracy of these analysis. These analysis reflect the best judgement by Southern Hydrocarbon Corporation

Client:	B & H Gas		-	
Well/Site:	Booker (?)	·		
Measuring	g Station:		!	
District:_			Pressure:_	N/A#
Date:	4/06/2016	1	Time:	1600
Remarks:		•	The state of the s	



934 Little Coal River, Suite B Alum Creek, West Virginia 25003

Phone: (304) 756-3171 • Fax (304) 756-1364 Chandler Engineering Co. Model 292/2920 BTU Analyzer

Test time: Apr.11 16 16:50

Test #:3047

Calibration #: 33 Location No.:3

					1		
	St.	andard/Dr	ry Analys	is	Saturajte	ed/Wet Ar	nalysis
	Mole%	BìU≭	R.Den.≭	GPM**	Molex		R.Den.*
Methans	67.745	685.82	0.3752	-	65.566	673.89	0.3687
Ethane	18.850	334.36	0.1957	5.0378	18.522	328.54	0.1923
Propane	8.418	212.30	0.1282	2.3177	8.271	208.61	0.1259
i-Butane	0.452	14.72	0.0091	0.1477	5.442	14.47	3.0307
n-Butane	& ~ ~	55.50	0.074]	g or the space	1,565	54.53	0. 115
i-Pentare	w to	٤, _ ·		٠, پيئي		1, 25	
។ ខែសារសំវាន	·	1. 1. 1 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m 2 m		e			
€ 19 °	* •			· · · <u>-</u> -		14.52	0.0091
5 V Tr. 1 Tr. 2		-	Section &	N	1.740	0.89	0.0108
2.037	. 7 - 1	0.00	0.0167	number tanker	i.897	0.00	0.0184
: 602 \	0.159	0.00	0.0024		φ.157¦	0.00	0.0024
Ideal	100 00	াম্ক্র ঞ	ስ ጛመልስ				

Ideal 100.00 1335.9 0.7840 8.3301

* : Uncorrected for compressibility at 60.0F & 14.730PSIA

**: Liquid Volume reported at 60.0F.

Standard/Dry Analysis Saturated/Wet Analysis

Molar Mass = 22.706 22.624
Relative Density = 0.7870 0.7843
Compressibility Factor = 0.9957 0.9954

Compressibility Factor = 0.9957 0:9956 Gross Heating Value = 22275. Btd/lb 21981. Btd/lb

Gross Heating Value = 1341.6 Btu/CF 1319.3 Btu/CF

Absolute Gas Density = 60.2298 | bm/1000CF 60.0178 | 1bm/1000CF

Wobbe Index = 1487.08

Unnormalized Total: 98.884

Last Calibrated with Calgas of 1056.4 Btu/CF Apr.11 16 09:33

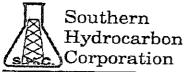
C6+ Last Update: GPA 2261-90.

C6+ BTU/CF 5065.8. C6+ lbm/Gal 5.64250, and C6+ Mbl.Wt. 92.00.

DISCLAIMER

All analysis are based solely on samples and materials supplied to Southern Hydrocarbon Corporation, it's officers and employees assume no responsibility for and make no warranty as to the productivity, proper operations, or profitability of any gas well or well or other operations or facilities in connection with which these analysis are relied upon. Southern Hydrocarbon Corporation makes no warranty as to the accuracy of these analysis. These analysis reflect the best judgement by Southern Hydrocarbon Corporation

Remarks:		
Date: 4/06/2016	Time:	1650
District:	Pressure:_	N/A#
Measuring Station:	; 	
Well/Site: Betsey Layne Shop		
Client: B & H Gas		
	,	



934 Little Coal River, Suite B Alum Creek, West Virginia 25003

Phone: (304) 758-3171 • Fax (304) 756-1364 Chandler Engineering Co. Model 292/2920 BTU Analyzer

Test time: Apr.11 16 17:07

Test #:3048

Calibration #: 33 Location No. :3

	Standard/Dry Analysis			Saturate	ed/W∈t An	alysis	
Na. 1.	Mole%	BTU*	₽.Den.%	GPM**	MoleX		R.Den.*
Methane	72.943	738.45	0.4040		71.674	725.60	0.3970
Ethane	16.119	285.93	0.1674	4.3081	15.839	280.95	0.1644
Fropane	6.530	164.69	0.0994	1.7980	6.417	161.83	0.0977
i-Butane	0.346	11.28	0.0069	0.1131	0.340	11.08	0.0048
n-Butane	1.247	40.76	0.0250	0.3930	1.225	40.05	0.0346
i-Pentane	0.151	6.07	0.0038	0.0554	0.149	5.96	0.0037
n-Pentane	0.182	7.33	0.0045	0.0661	0.179	7.20	0.0045
(C6+)	0.213	10.83	0.0068	0.0919	0.210	10.64	0.0043
Moisture	0.000	0.00	0.0000	~~	1.740	0.89	0.0108
Nitrogen	2.116	0.00	0.0205	Teamer garage	2.079	0.00	0.0201
(CO2)	0.152	0.00	0.0023		0.149	0.00	0.0023

Ideal 100.00 1265.3 0.7406 6.8256

* : Uncorrected for compressibility at 60.0F & 14.730PSIA.

**: Liquid Volume reported at 60.0F.

Standard/Dry Analysis Saturated/Wet Analysis

Molar Mass = 21.450 Zi.390 Relative Density = 0.7431 0.7411 Compressability Factor = 0.9962 0.9962

Gross Heating Value = 22334. Btu/1b 22022. Btu/1b

Gross Heating Value = 1270.1 Btu/CF 1249.0 Btu/CF

Absolute Gas Density = 56.8693 lbm/1000CF 56.7156 lbm/1000CF

Wobbe Index = 1448.89

Unnormalized Total : 78.966

Last Calibrated with Calgas of 1056.4 Btu/CF Apr.11 16 09:33

Remarks:

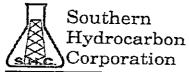
C6+ Last Update: GPA 2261-90.

C6+ BTU/CF 5065.8. C6+ 15m/Gal 5.64250, and C6+ Mol. Wt. 92.00

DISCLAIMER

All analysis are based solely on samples and materials supplied to Southern Hydrocarbon Corporation, it's officers and employees assume no responsibility for and make no warranty as to the productivity, proper operations, or profitability of any gas well or well or other operations or facilities in connection with which these analysis are relied upon. Southern Hydrocarbon Corporation makes no warranty as to the accuracy of these analysis. These analysis reflect the best judgement by Southern Hydrocarbon Corporation

Pressure:_	N/A#
Time:	1730



934 Little Coal River, Suite B Alum Creek, West Virginia 25003

Phone: (304) 756-3171 • Fax (304) 756-1364

Chandler Engineering Co. Model 292/2920 BTU Analyzer

Test time: Apr.04 16 16:13

Test #:3021

Calibration #: 30 Location No. :3

	St.	endard/Dr	ry Anal∨s	315	Saturati	ed/Wet Ai	nalvsic
	Mole%	BTU*	R.Den.*	GPM**	Molek		
Methane	74.920	758.47	0.4150	····	73.617	745.27	0.4078
Ethane	15.662	277.81	0.1626	4.1858	15.389	272.96	0.1598
Propane	5.987	151.00	0.0912	1.6485	5.883	148.38	0.0876
i-Butane	0.297	9.69	0.0060	0.0972	'o.291	9.52	0.0059
n-Butane	1.004	32.82	0.0201	0.3164	10.985	32.25	0.0178
i-Pentane	0.105	4.22	0.0025	0.0385	0.105	4.15	0.0026
n-Pentane	0.120	4.83	0.0030	0.0435	0.115	4.75	0.0029
(E6+)	0.096	4.89	0.0051	0,0414	0.095	4.80	0.0030
Moisture	0.000	5.00	0.0000	- 	1.740	0.88	0.0000
Nitrogen	1.235	0.00	0.0119		1.213	0.00	0.0117
(CO2)	0.573	0.00	0.0087	4000-1000	0.563	0.00	0.0086
Ideal	100.00	1243.7	0.7242	6.3715			

* : Uncorrected for compressibility at 60.0F & 14.730PSIA.

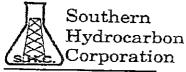
**: Liquid Volume reported at 60.0F.

Relative Density =	20.974 C.7265	Saturated/Wet Analysis 20.922 0.7248
Compressibility Factor =		ĭ.99₺\$
Gross Heating Value =	22451. Btu/15	22131 Btu/1b
Gross Heating Value =		1227.5 Btu/CF
Unnormalized Total: 9	1440.14 8.337	55,4459 15m/1000CF
Last Calibrated with Cal C6+ Last Update: GPA 226 C6+ BTU/CF 5065.8,	ças of 1056.4 Btu/CF 1-90. C6+ bm/Gal 5.64250, an	

DISCLAIMER

All analysis are based solely on samples and materials supplied to Southern Hydrocarbon Corporation by the elicit. Southern Hydrocarbon Corporation, it's officers and employees assume no responsibility for and make no warranty as to the productivity, proper operations, or profitability of any gas well or well or other operations or facilities in connection with which these analysis are relied upon. Southern Hydrocarbon Corporation makes no warranty as to the accuracy of these analysis. These analysis reflect the best judgement by Southern Hydrocarbon Corporation

Remarks:	a		
Date:	4/02/2016	Time:	1200
District:_		Pressure:_	125#
Measuring	g Station:		
Well/Site:	Mare Creek		·
Client:	B & H Gas	-	



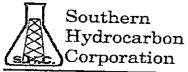
934 Little Coal River, Suite B Alum Creek, West Virginia 25003 Phone: (304) 756-3171 • Fax (304) 756-1364

SAMPLE BAG SPLIT NO ANALYSIS ATTEMPTED

DISCLAIMER

All analysis are based solely on samples and materials supplied to Southern Hydrocarbon Corporation, it's officers elient. Southern Hydrocarbon Corporation, it's officers and employees assume no responsibility for and make no warranty as to the productivity, proper operations, or profitability of any gas well or well or other operations or facilities in connection with which these analysis are relied upon. Southern Hydrocarbon Corporation makes no warranty as to the accuracy of these analysis. These analysis reflect the best judgement by Southern Hydrocarbon Corporation

Client:_	B & H Gas		
Well/Site	Booker .		
Measuri	ng Station:	<u> </u>	
District:		Pressure:_	125#
Date:	4/02/2016	Time:	1230
Remarks	· ·		



934 Little Coal River, Suite B Alum Creek, West Virginia 25003

Phone: (304) 756-3171 • Fax (304) 756-1364

Chandler Engineering Co. Model 292/2920 BTU Analyzer

Test time: Apr.04 16 16:44

Test #:3023

Calibration #:

30 Location No. :3

Methane Ethane Propane i-Butane n-Butane i-Pentane n-Pentane (C6+) Moisture Nitrogen	Mole% 69.052 18.331 8.052 0.426 1.545 0.178 0.217 0.193 0.000 1.830	699.05 325.16 203.08 13.88 50.51 7.13 8.72 9.79 0.00 0.00	R.Den.* 0.3825 0.1903 0.1226 0.0085 0.0310 0.0044 0.0054 0.0061 0.0000 0.0177	GPM** 4.8993 2.2170 0.1393 0.4869 0.0650 0.0786 0.0830	Molex 7.850 18.012 7.912 0.418 1.518 0.175 0.189 0.189 1.798	ed/Wet Ar BTU* 686.89 319.50 199.54 13.64 49.63 7.00 8.57 9.62 0.88 0.00	nalysis R.Den.* 0.3758 0.1870 0.1205 0.0084 0.0305 0.0043 0.0053 0.0060 0.0108 0.0174
(CO2)	1.830 0.177	0.00	0.0177 0.0027	Sonia, anniu	1.798 0.174		

Ideal 100.00 1317.3 0.7713 7.9692

* : Uncorrected for compressibility at 60.0F & 14.73ppsiA.

**: Liquid Volume reported at 60.0F.

Standard/Dry Analysis Saturated/Wet Analysis

Molar Mass 22.338 22.263 Relative Density 0.7742 0.7716 Compressibility Factor = 0.9958

0.9958 Gross Heating Value 22327. Btu/1b 22028. Btu/15

Gross Heating Value 1322.8 Btu/CF 1500.8 Btu/CF

Absolute Gas Density 59.2460 lbm/1000CF 59.0511 1bm/1000F

Wobbe Index = .1478.36

Unnormalized Total: 78,183

Last Calibrated with Caloas of 1056.4 Btu/CF Apr. 04 16 10:33

C6+ Last Update: GPA 2261-90.

C6+ STU/CF 5065.8. C6+ 1bm/Gal 5.64250, and C6+ Mol.Wt. 92.00.

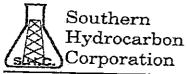
DISCLAIMER

All analysis are based solely on samples and materials supplied to Southern Hydrocarbon Corporation by the client. Southern Hydrocarbon Corporation, it's officers and employees assume no responsibility for and make no warranty as to the productivity, proper operations, or profitability of any gas well or well or other operations or facilities in connection with which these analysis are relied upon. Southern Hydrocarbon Corporation makes no warranty as to the accuracy of these analysis. These analysis reflect the best judgement by Southern Hydrocarbon Corporation

Client:	B & H Gas			
Well/Site:_	Betsy Lane	f	l ·	
Measuring	Station:	,		

District: Pressure: 45#

Date: 4/02/2016 Time: 1300 Remarks:



934 Little Coal River, Suite B Alum Creek, West Virginia 25003

Phone: (304) 756-8171 • Fax (304) 756-1864 Model 292/2920 BTU Analyzer

Test time: Apr.04 16 17:00 Test #:3024

Calibration #: 30 Location No. :3

Standard/Dry Analysis Saturated/Wet Analysis Molex BTU* R.Den.* **GFM**** Molex BTU# R.Den.# Methane 73.625 745.35 0.4078 72.344 732.38 Ethane 0.4007 16.176 286,93 0.1679 4.3233 15.895 281.94 Propene 0.1650 6.698 168.92 0.1020 1,8441 6.581 165.98 i-Butane 0.1002 0.357 11.64 0.0072 0.1168 10.351 11.44 n-Butane 0.0070 1.291 42.23 0.0259 0.4071 1.269 41.49 i-Pentane 0.0255 0.157 6.29 0.0037 0.0574 0.154 6.18 n-Pentane 0.0038 0.192 7.71 0.0048 0.0695 0.189 7.57 (66+)0.0047 0.225 11.42 0.0071 0.0969 0.221 11.22 0.0070 Moisture 0.000 0.00 0.0000 1.740 98.0 0.0108 Nitrogen 1.179 0.00 0.0114 1.158 0.00 0.0112 (002) 0.100 0.00 0.00150.099 0.00 0.0015

Ideal 100.00 1280.5 0.7396 6.9150 * : Uncorrected for compressibility at 60.0F & 14.730PSIA.

**: Liquid Volume reported at 60.0F.

Standard/Dry Analysis Saturated/Wet Analysis Molar Mass = 21.419 21.560 Relative Density = 0.7421 0:7401

Compressibility Factor = 0.9962 0.7961 Gross Heating Value 22634. Btu/ib

22317. Btu/16

Gross Heating Value 1285.4 Btu/CF 1264.0 Btu/CF

Absolute Gas Density 56.7909 lbm/1000CF 56.6385 1bm/1000CF Wobbe Index 1467.32

Unnormalized Total: 95.788

Last Calibrated with Calgas of 1056.4 Btu/CF Apr.04 16 10:33

Có+ Last Update: GPA 2251-90.

5065.8, C6+ 16m/Gal 5.64250, and C64 Mol.Wt. C6+ BTU/CF

DISCLAIMER

All analysis are based solely on samples and materials supplied to Southern Hydrocarbon Corporation by the client. Southern Hydrocarbon Corporation, it's officers and employees assume no responsibility for and make no warranty as to the productivity, proper operations, or profitability of any gas well or well or other operations or facilities in connection with which these analysis are relied upon. Southern Hydrocarbon Corporation makes no warranty as to the accuracy of these analysis. These analysis reflect the best judgement by Southern Hydrocarbon Corporation

Client:	B & H Gas	1		
Well/Site:_	<u>Ivel</u>	,	į į	
Measuring	Station:			
District:		ì	Pressure:	80#

_Pressure: 80# 4/02/2016 Time: 1400

Remarks:

Sample 1: B&H Gas: Mare Creek

Sampled 2016-04-02 @1200 (125 psi) by BR

Species	ppm
Hydrogen Sulfide	N/D
Methyl Mercaptan	N/D
Ethyl Mercaptan	N/D
Carbon Disulfide	N/D
Dimethyl Sulfide	N/D

N/D = Non-Detect

Sample 2: B&H Gas: Booker

Sampled 2016-04-02 @1230 (125 psi) by BR

Species	ppm
Hydrogen Sulfide	N/D
Methyl Mercaptan	N/D
Ethyl Mercaptan	N/D
Carbon Disulfide	N/D
Dimethyl Sulfide	N/D

N/D = Non-Detect

Sample 3: B&H Gas: Betsy Layne

Sampled 2016-04-02 @1300 (45 psi) by BR

	- TOOO (42 k
Species	ppm
Hydrogen Sulfide	N/D
Methyl Mercaptan	N/D
Ethyl Mercaptan	N/D
Carbon Disulfide	N/D
Dimethyl Sulfide	N/D

N/D = Non-Detect

Sample 4: B&H Gas: Ivel

Sampled 2016-04-02 @1400 (80 psi) by BR

Species	ppm
Hydrogen Sulfide	N/D
Methyl Mercaptan	N/D
Ethyl Mercaptan	N/D
Carbon Disulfide	N/D
Dimethyl Sulfide	N/D

N/D = Non-Detect