EXTENDED NATURAL GAS ANALYSIS (*DHA)

MAIN PAGE

PRIMARY DB KEY:	**05-045-19132**	NAME/DESCRIP :	**SGV FEDERAL #8-11C (8D)**
LEASE #:	**300115258, COC-58670**		**BRAIDEN HEAD**
FIELD/AREA:	**PARACHUTE - #67350**		

PROJECT NO. :	**202405084**	ANALYSIS NO. :	**06**
COMPANY NAME :	**CAERUS OIL & GAS LLC**	ANALYSIS DATE:	MAY 21, 2024 10:45
OFFICE / BRANCH:	PARACHUTE, CO	SAMPLE DATE :	MAY 9, 2024 9:00
CUSTOMER REF:		TO:	
PRODUCER :	CAERUS PICEANCE LLC	EFFECTIVE DATE:	

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

SAMPLE CYCLE:			SAMPLE TYPE:	SPOT
SAMPLE PRES. :	49	psig	PROBE :	NO
FLOW PRES. :		psig	CYLINDER NO. :	ECA-700
LAB PRES:		psig	SAMPLED BY :	ALEX GALLEGOS
SAMPLE TEMP. :	49	ºf	SAMPLING COMPANY:	CAERUS OIL & GAS LLC
AMBIENT TEMP.:		ºf	H2S BY STAIN TUBE:	ppm mol
H2O BY STAIN TUBE:		#/mmcf	CO2 BY STAIN TUBE:	Mol %

FIELD COMMENTS:

LAB COMMENTS:

COMPONENT	MOLE %	MASS %	GPM @ 14.65	GPM @ 14.73
ALCOHOLS	0.0001	0.0004	0.0000	0.0000
HELIUM	0.00	0.00	---	---
HYDROGEN	0.03	0.00	---	---
OXYGEN/ARGON	0.00	0.00	---	---
NITROGEN	0.12	0.19	---	---
CARBON DIOXIDE	0.02	0.05	---	---
METHANE	91.2982	80.9420	---	---
ETHANE	5.4691	9.0881	1.4581	1.4661
PROPANE	1.7404	4.2411	0.4777	0.4803
I-BUTANE	0.3252	1.0445	0.1059	0.1065
N-BUTANE	0.3633	1.1669	0.1139	0.1146
I-PENTANE	0.1408	0.5609	0.0500	0.0502
N-PENTANE	0.0863	0.3441	0.0310	0.0311
HEXANES PLUS	0.4066	2.3720	0.1720	0.1723
TOTALS	100.00000	100.00000	2.4086	2.4211

BTEX COMPONENTS	MOLE%	WT%
BENZENE	0.0014	0.0060
TOLUENE	0.0005	0.0025
ETHYLBENZENE	0.0021	0.0123
XYLENES	0.0033	0.0194
TOTAL BTEX	0.0073	0.0402

CALCULATED VALUES**

	BTU @	14.65		14.73	
LHV	NET DRY REAL :	1007.9	/scf	1013.4	/scf
	NET WET REAL :	990.3	/scf	995.8	/scf
HHV	GROSS DRY REAL :	1115.1	/scf	1121.2	/scf
	GROSS WET REAL :	1095.6	/scf	1101.7	/scf

NET HEATING VALUE (60 °F ideal reaction):	21181.9	Btu/lbm
GROSS HEATING VALUE (60°F ideal reaction):	23441.7	Btu/lbm
RELATIVE DENSITY (AIR=1):	0.6231	
DENSITY	0.04768	lbm/scf
COMPRESSIBILITY FACTOR :	0.9975	
REGULAR WOBBE INDEX	1413.5	

**(DETAILED HYDROCARBON ANALYSIS/NJ 1993)*
Mod ASTM D6730,GPA 2261 & GPA 2286.

***(CALC: GPA 2172, GPA 2145 & TP-17 @14.696 & 60 F)*

EMPACT

EXTENDED NATURAL GAS ANALYSIS (*DHA)

GLYCALC INFORMATION

PROJECT NO. :	202405084	ANALYSIS NO. :	06
COMPANY NAME :	CAERUS OIL & GAS LLC	ANALYSIS DATE:	MAY 21, 2024 10:45
ACCOUNT NO. :		SAMPLE DATE :	MAY 9, 2024 9:00
PRODUCER :	CAERUS PICEANCE LLC	CYLINDER NO. :	ECA-700
LEASE NO. :	300115258, COC-58670	SAMPLED BY :	ALEX GALLEGOS
NAME/DESCRIP :	SGV FEDERAL #8-11C (8D) BRAIDEN HEAD		
FIELD DATA		SAMPLE TEMP. :	49
SAMPLE PRES. :	49	AMBIENT TEMP.:	
H2S BY STAIN TUBE:	_ *ppm mol*		
COMMENTS :	*SPOT* *NO PROBE*		

Componet	Mole %	Wt %
Helium	0.00	0.00
Hydrogen	0.03	0.00
Carbon Dioxide	0.02	0.05
Nitrogen	0.12	0.19
Methane	91.2982	80.9420
Ethane	5.4691	9.0881
Propane	1.7404	4.2411
Isobutane	0.3252	1.0445
n-Butane	0.3633	1.1669
Isopentane	0.1360	0.5423
n-Pentane	0.0863	0.3441
Cyclopentane	0.0048	0.0186
n-Hexane	0.0287	0.1367
Cyclohexane	0.0223	0.1037
Other Hexanes	0.0839	0.3972
Heptanes	0.0556	0.3059
Methylcyclohexane	0.0566	0.3071
2,2,4 Trimethylpentane	0.0000	0.0000
Benzene	0.0014	0.0060
Toluene	0.0005	0.0025
Ethylbenzene	0.0021	0.0123
Xylenes	0.0033	0.0194
C8+ Heavies	0.1522	1.0812
Subtotal	99.99990	99.99960
Oxygen/Argon	0.00	0.00
Alcohols	0.0001	0.0004
Total	100.00000	100.00000

Calculated Values BTU @ **14.65**		**Total Sample**	**C6+ Fraction**	**C8+ Fraction**	**C10+ Fraction**	
LHV	Net Dry Real:	1007.9	5324.3	6408.9	7614.7	**Btu/scf**
	Net Wet Real:	990.3	5231.2	6296.9	7481.6	**Btu/scf**
HHV	Gross Dry Real:	1115.1	5737.7	6914.3	8264.2	**Btu/scf**
	Gross Wet Real:	1095.6	5637.4	6793.4	8119.7	**Btu/scf**
Other Calculated Values						
Regualr Wobbe Index*		1413.5	2998.6	3296.5	3623.6	**Btu/scf**
Net Heating Value (60 °F ideal reaction):		21181.9	19338.4	19399.0	18796.8	**Btu/lbm**
Gross Heating Value (60°F ideal reaction):		23441.7	20834.8	20924.5	20391.4	**Btu/lbm**
Molar Mass (MW):		18.09484	105.616	127.882	151.529	**g/mol**
Relative Density (AIR=1):		0.6231	3.6471	4.4146	5.2317	**SG**
Density:		0.04768	0.27831	0.33698	0.39931	**lbm/scf**
Compressiblity Factor:		0.9975	0.9949	0.9986	0.9998	**Z**
Liquid Volume real gas @:	**14.65**	17.8111	0.1715	0.0718	0.0199	**gal/1000 scf**

**** The Wobbe pressure base in the number considered is based upon the given Pb of the HHV above.***

#DIV/0 or 0 (zero) will appear in the Calculated Value Section when there is no C6+, C8+ or C10+ in the sample to calculate these factors.

BDL - Below Detection Limit. The H2S LOS has a detection limit of 0.25 ppm. A _ (an uderscore) indicates there was no tube pulled for H2S.

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EXTENDED NATURAL GAS ANALYSIS (*DHA)

DHA COMPONENT LIST

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FLOW PRES. :	psig	CYLINDER NO. :	ECA-700
LAB PRES:	psig	SAMPLED BY :	ALEX GALLEGOS
SAMPLE TEMP. :	49 ºf	SAMPLING COMPANY:	CAERUS OIL & GAS LLC
AMBIENT TEMP.:	ºf	H2S BY STAIN TUBE:	_ ppm mol
H2O BY STAIN TUBE:	- #/mmcf	CO2 BY STAIN TUBE:	- Mol %
FIELD COMMENTS:			
LAB COMMENTS:			

COMPONENT	PIANO #	MOLE %	MASS %	GPM @ **14.65**	GPM @ **14.73**
Helium	---	0.00	0.00	---	---
Hydrogen	---	0.03	0.00	---	---
Oxygen/Argon	---	0.00	0.00	---	---
Nitrogen	---	0.12	0.19	---	---
Carbon Dioxide	---	0.02	0.05	---	---
Methane	P1	91.2982	80.9420	---	---
Ethane	P2	5.4691	9.0881	1.458	1.466
Propane	P3	1.7404	4.2411	0.478	0.480
i-Butane	I4	0.3252	1.0445	0.106	0.107
n-Butane	P4	0.3633	1.1669	0.114	0.115
2,2-Dimethylpropane	I5	0.0035	0.0140	0.001	0.001
i-Pentane	I5	0.1325	0.5283	0.048	0.048
n-Pentane	P5	0.0863	0.3441	0.031	0.031
t-Butanol	X4	0.0001	0.0004	0.000	0.000
2,2-Dimethylbutane	I6	0.0041	0.0195	0.002	0.002
Cyclopentane	N5	0.0048	0.0186	0.001	0.001
2,3-Dimethylbutane	I6	0.0074	0.0353	0.003	0.003
2-Methylpentane	I6	0.0329	0.1567	0.014	0.014
3-Methylpentane	I6	0.0177	0.0843	0.007	0.007
n-Hexane	P6	0.0287	0.1367	0.012	0.012
2,2-Dimethylpentane	I7	0.0010	0.0055	0.000	0.000
Methylcyclopentane	N6	0.0218	0.1014	0.008	0.008
2,4-Dimethylpentane	I7	0.0020	0.0110	0.001	0.001
2,2,3-Trimethylbutane	I7	0.0005	0.0028	0.000	0.000
Benzene	A6	0.0014	0.0060	0.000	0.000
3,3-Dimethylpentane	I7	0.0007	0.0039	0.000	0.000
Cyclohexane	N6	0.0223	0.1037	0.008	0.008
2-Methylhexane	I7	0.0097	0.0537	0.004	0.004
2,3-Dimethylpentane	I7	0.0026	0.0144	0.001	0.001
1,1-Dimethylcyclopentane	N7	0.0020	0.0108	0.001	0.001

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3-Methylhexane	I7	0.0095	0.0526	0.004	0.004
1c,3-Dimethylcyclopentane	N7	0.0038	0.0206	0.002	0.002
1t,3-Dimethylcyclopentane	N7	0.0034	0.0185	0.002	0.002
3-Ethylpentane	I7	0.0005	0.0028	0.000	0.000
1t,2-Dimethylcyclopentane	N7	0.0054	0.0293	0.002	0.002
n-Heptane	P7	0.0118	0.0653	0.005	0.005
1c,2-Dimethylcyclopentane	N7	0.0004	0.0022	0.000	0.000
Methylcyclohexane	N7	0.0566	0.3071	0.023	0.023
2,2-Dimethylhexane	I8	0.0013	0.0082	0.001	0.001
1,1,3-Trimethylcyclopentane	N7	0.0002	0.0012	0.000	0.000
Ethylcyclopentane	N7	0.0020	0.0108	0.001	0.001
2,5-Dimethylhexane	I8	0.0013	0.0082	0.001	0.001
2,2,3-Trimethylpentane	I8	0.0011	0.0070	0.001	0.001
2,4-Dimethylhexane	I8	0.0002	0.0013	0.000	0.000
1c,2t,4-Trimethylcyclopentane	N8	0.0012	0.0075	0.001	0.001
3,3-Dimethylhexane	I8	0.0004	0.0025	0.000	0.000
2,3,3-Trimethylpentane	I8	0.0001	0.0006	0.000	0.000
Toluene	A7	0.0005	0.0025	0.000	0.000
2,3-Dimethylhexane	I8	0.0013	0.0082	0.001	0.001
2-Methyl-3-ethylpentane	I8	0.0002	0.0013	0.000	0.000
2-Methylheptane	I8	0.0061	0.0385	0.003	0.003
4-Methylheptane	I8	0.0021	0.0133	0.001	0.001
3-Methyl-3-ethylpentane	I8	0.0003	0.0019	0.000	0.000
3,4-Dimethylhexane	I8	0.0002	0.0013	0.000	0.000
1c,2c,4-Trimethylcyclopentane	N8	0.0001	0.0006	0.000	0.000
3-Methylheptane	I8	0.0047	0.0297	0.002	0.002
1c,2t,3-Trimethylcyclopentane	N8	0.0114	0.0707	0.006	0.006
3-Ethylhexane	I8	0.0004	0.0025	0.000	0.000
1t,4-Dimethylcyclohexane	N8	0.0045	0.0279	0.002	0.002
1,1-Dimethylcyclohexane	N8	0.0014	0.0087	0.001	0.001
2,2,5-Trimethylhexane	I9	0.0002	0.0014	0.000	0.000
3c-Ethylmethylcyclopentane	N8	0.0005	0.0031	0.000	0.000
3t-Ethylmethylcyclopentane	N8	0.0004	0.0025	0.000	0.000
2t-Ethylmethylcyclopentane	N8	0.0005	0.0031	0.000	0.000
1,1-Methylethylcyclopentane	N8	0.0001	0.0006	0.000	0.000
2,2,4-Trimethylhexane	I9	0.0002	0.0014	0.000	0.000
1t,2-Dimethylcyclohexane	N8	0.0039	0.0242	0.002	0.002
1t,3-Dimethylcyclohexane	N8	0.0001	0.0006	0.000	0.000
UnknownC7s	U7	0.0001	0.0005	0.000	0.000
n-Octane	P8	0.0098	0.0618	0.005	0.005
1c,4-Dimethylcyclohexane	N8	0.0032	0.0198	0.002	0.002
i-Propylcyclopentane	I8	0.0003	0.0019	0.000	0.000
2,3,5-Trimethylhexane	I9	0.0004	0.0028	0.000	0.000
2,2,3,4-Tetramethylpentane	I9	0.0001	0.0007	0.000	0.000
2,3,4-Trimethylhexane	I9	0.0002	0.0014	0.000	0.000
1c,2-Dimethylcyclohexane	N8	0.0001	0.0006	0.000	0.000
2,2-Dimethylheptane	I9	0.0014	0.0099	0.001	0.001
1,1,4-Trimethylcyclohexane	N9	0.0049	0.0342	0.003	0.003
2,2,3-Trimethylhexane	I9	0.0008	0.0057	0.000	0.000
2,4-Dimethylheptane	I9	0.0003	0.0021	0.000	0.000
4,4-Dimethylheptane	I9	0.0001	0.0007	0.000	0.000
Ethylcyclohexane	N8	0.0033	0.0204	0.001	0.001
n-Propylcyclopentane	N8	0.0016	0.0099	0.001	0.001
1c,3c,5-Trimethylcyclohexane	N9	0.0005	0.0035	0.000	0.000
2,5-Dimethylheptane	I9	0.0025	0.0177	0.001	0.001
3,3-Dimethylheptane	I9	0.0004	0.0028	0.000	0.000
3,5-Dimethylheptane	I9	0.0001	0.0007	0.000	0.000
2,6-Dimethylheptane	I9	0.0002	0.0014	0.000	0.000
1,1,3-Trimethylcyclohexane	N9	0.0003	0.0021	0.000	0.000
Ethylbenzene	I8	0.0021	0.0123	0.001	0.001
1c,2t,4t-Trimethylcyclohexane	N9	0.0002	0.0014	0.000	0.000
2,3-Dimethylheptane	I9	0.0003	0.0021	0.000	0.000
1,3-Dimethylbenzene (m-Xylene)	A8	0.0024	0.0141	0.001	0.001

1,4-Dimethylbenzene (p-Xylene)	A8	0.0007	0.0041	0.000	0.000
3,4-Dimethylheptane	I9	0.0002	0.0014	0.000	0.000
3,4-Dimethylheptane (2)	I9	0.0005	0.0035	0.000	0.000
4-Ethylheptane	I9	0.0004	0.0028	0.000	0.000
4-Methyloctane	I9	0.0021	0.0149	0.001	0.001
2-Methyloctane	I9	0.0026	0.0184	0.001	0.001
1c,2t,3-Trimethylcyclohexane	N9	0.0003	0.0021	0.000	0.000
3-Ethylheptane	I9	0.0003	0.0021	0.000	0.000
3-Methyloctane	I9	0.0004	0.0028	0.000	0.000
1c,2t,4c-Trimethylcyclohexane	I9	0.0030	0.0209	0.002	0.002
1,1,2-Trimethylcyclohexane	N9	0.0002	0.0014	0.000	0.000
3,3-Diethylpentane	I9	0.0003	0.0021	0.000	0.000
1,2-Dimethylbenzene (o-Xylene)	A8	0.0002	0.0012	0.000	0.000
i-Butylcyclopentane	N9	0.0023	0.0160	0.001	0.001
n-Nonane	P9	0.0075	0.0532	0.004	0.004
1,1-Methylethylcyclohexane	N9	0.0012	0.0083	0.001	0.001
i-Propylbenzene	A9	0.0007	0.0046	0.000	0.000
i-Propylcyclohexane	N9	0.0005	0.0035	0.000	0.000
2,2-Dimethyloctane	I10	0.0003	0.0024	0.000	0.000
2,4-Dimethyloctane	I10	0.0004	0.0031	0.000	0.000
2,6-Dimethyloctane	I10	0.0003	0.0024	0.000	0.000
2,5-Dimethyloctane	I10	0.0002	0.0015	0.000	0.000
n-Butylcyclopentane	N9	0.0016	0.0112	0.001	0.001
3,3-Dimethyloctane	I10	0.0007	0.0055	0.000	0.000
n-Propylbenzene	A9	0.0018	0.0119	0.001	0.001
3,6-Dimethyloctane	I10	0.0002	0.0015	0.000	0.000
3-Methyl-5-ethylheptane	I10	0.0004	0.0031	0.000	0.000
1,3-Methylethylbenzene	A9	0.0004	0.0026	0.000	0.000
1,4-Methylethylbenzene	A9	0.0002	0.0013	0.000	0.000
1,3,5-Trimethylbenzene	A9	0.0008	0.0053	0.000	0.000
2,3-Dimethyloctane	I10	0.0004	0.0031	0.000	0.000
5-Methylnonane	I10	0.0011	0.0087	0.001	0.001
1,2-Methylethylbenzene	A9	0.0003	0.0020	0.000	0.000
2-Methylnonane	I10	0.0010	0.0078	0.001	0.001
3-Ethyloctane	I10	0.0004	0.0031	0.000	0.000
3-Methylnonane	I10	0.0009	0.0071	0.001	0.001
t-Butylbenzene	A10	0.0010	0.0074	0.000	0.000
i-Butylcyclohexane	N10	0.0005	0.0039	0.000	0.000
1t-Methyl-2-n-propylcyclohexane	I10	0.0002	0.0015	0.000	0.000
i-Butylbenzene	A10	0.0001	0.0007	0.000	0.000
sec-Butylbenzene	A10	0.0001	0.0007	0.000	0.000
UnknownC9s	U9	0.0037	0.0262	0.002	0.002
n-Decane	P10	0.0030	0.0236	0.002	0.002
1,2,3-Trimethylbenzene	A9	0.0001	0.0007	0.000	0.000
1,3-Methyl-i-propylbenzene	A10	0.0001	0.0007	0.000	0.000
1,4-Methyl-i-propylbenzene	A10	0.0009	0.0067	0.001	0.001
1,2-Methyl-i-propylbenzene	A10	0.0004	0.0030	0.000	0.000
3-Ethylnonane	I10	0.0002	0.0017	0.000	0.000
1,3-Diethylbenzene	A10	0.0002	0.0015	0.000	0.000
1,3-Methyl-n-propylbenzene	A10	0.0003	0.0022	0.000	0.000
1,4-Diethylbenzene	A10	0.0003	0.0022	0.000	0.000
1,4-Methyl-n-propylbenzene	A10	0.0001	0.0007	0.000	0.000
n-Butylbenzene	A10	0.0002	0.0015	0.000	0.000
1,3-Dimethyl-5-ethylbenzene	A10	0.0004	0.0030	0.000	0.000
1,2-Diethylbenzene	A10	0.0002	0.0015	0.000	0.000
1,2-Methyl-n-propylbenzene	A10	0.0003	0.0022	0.000	0.000
1,3-Dimethyl-4-ethylbenzene	A10	0.0006	0.0045	0.000	0.000
1,2-Dimethyl-4-ethylbenzene	A10	0.0002	0.0015	0.000	0.000
1,3-Dimethyl-2-ethylbenzene	A10	0.0006	0.0045	0.000	0.000
1,2-Dimethyl-3-ethylbenzene	A10	0.0002	0.0015	0.000	0.000
1,2-Ethyl-i-propylbenzene	A10	0.0003	0.0024	0.000	0.000
1,4-Methyl-t-butylbenzene	A11	0.0002	0.0017	0.000	0.000
UnknownC10s	U10	0.0045	0.0354	0.003	0.003
n-Undecane	P11	0.0036	0.0311	0.002	0.002

1,4-Ethyl-i-propylbenzene	A11	0.0006	0.0049	0.000	0.000
1,2,4,5-Tetramethylbenzene	A11	0.0002	0.0015	0.000	0.000
1,2-Methyl-n-butylbenzene	A11	0.0005	0.0041	0.000	0.000
1,2,3,5-Tetramethylbenzene	A11	0.0002	0.0015	0.000	0.000
1,2-Methyl-t-butylbenzene	A11	0.0004	0.0033	0.000	0.000
5-Methylindan	A11	0.0002	0.0014	0.000	0.000
4-Methylindan	A11	0.0002	0.0014	0.000	0.000
1,2-Ethyl-n-propylbenzene	A11	0.0003	0.0024	0.000	0.000
2-Methylindan	A11	0.0001	0.0007	0.000	0.000
1,3-Methyl-n-butylbenzene	A11	0.0002	0.0017	0.000	0.000
1,3-Di-i-propylbenzene	A11	0.0003	0.0027	0.000	0.000
sec-Pentylbenzene	A11	0.0003	0.0024	0.000	0.000
n-Pentylbenzene	A11	0.0001	0.0008	0.000	0.000
1,2-Di-n-propylbenzene	A11	0.0004	0.0036	0.000	0.000
Tetrahydronaphthalene	A10	0.0001	0.0007	0.000	0.000
Naphthalene	A10	0.0002	0.0014	0.000	0.000
1-t-Butyl-3,5-dimethylbenzene	A12	0.0002	0.0018	0.000	0.000
1,4-Ethyl-t-butylbenzene	A11	0.0003	0.0027	0.000	0.000
1,3-Di-n-propylbenzene	A12	0.0004	0.0036	0.000	0.000
UnknownC11s	U11	0.0033	0.0285	0.002	0.002
n-Dodecane	P12	0.0018	0.0170	0.001	0.001
1,3,5-Triethylbenzene	A12	0.0006	0.0054	0.000	0.000
1,2,4-Triethylbenzene	A12	0.0002	0.0018	0.000	0.000
1,4-Methyl-n-pentylbenzene	A12	0.0004	0.0036	0.000	0.000
n-Hexylbenzene	A12	0.0002	0.0018	0.000	0.000
1,2,3,4,5-Pentamethylbenzene	A13	0.0002	0.0017	0.000	0.000
2-Methylnaphthalene	A11	0.0003	0.0024	0.000	0.000
UnknownC12s	U12	0.0040	0.0345	0.003	0.003
n-Tridecane	P13	0.0004	0.0041	0.000	0.000
UnknownC13s	U13	0.0029	0.0296	0.002	0.002
n-Tetradecane	P14	0.0001	0.0011	0.000	0.000
UnknownC14s	U14	0.0010	0.0109	0.001	0.001
TOTAL		100.00000	100.00000	2.4086	2.4211

BTEX COMPONENTS	MOLE%	WT%
BENZENE	0.0014	0.0060
TOLUENE	0.0005	0.0025
ETHYLBENZENE	0.0021	0.0123
XYLENES	0.0033	0.0194
TOTAL BTEX	0.0073	0.0402

(DETAILED HYDROCARBON ANALYSIS/NJ 1993)

Mod ASTM D6730,GPA 2261 & GPA 2286.

**(CALC: GPA 2172, GPA 2145 & TP-17 @14.696 & 60 F)*

CALCULATED VALUES**

	BTU @	14.65	14.73	
LHV	NET DRY REAL :	1007.9 /scf	1013.4	/scf
	NET WET REAL :	990.3 /scf	995.8	/scf
HHV	GROSS DRY REAL :	1115.1 /scf	1121.2	/scf
	GROSS WET REAL :	1095.6 /scf	1101.7	/scf
	NET HEATING VALUE (60 °F ideal reaction):		21181.9	Btu/lbm
	GROSS HEATING VALUE (60°F ideal reaction):		23441.7	Btu/lbm
	RELATIVE DENSITY (AIR=1):		0.6231	
	DENSITY		0.04768	lb/scf
	COMPRESSIBILITY FACTOR :		0.9975	
	REGULAR WOBBE INDEX		1413.5	

C6+ Fraction of DHA Gas Analysis @60°F, 14.696 psia

Net Dry Ideal BTU	5313.9 /scf	Relative Density - SG (Air=1)	3.6471	***C6+factors***
Gross Dry Ideal BTU	5726.5 /scf	**Z** Compressiblity Factor	0.99492	0.99378
Net Dry Ideal BTU	19338.4 /lb	Density Factor	278.313 lbm/1000 ft3	
Gross Dry Ideal BTU	20834.8 /lb	Molar Mass or MW	105.616 g/mol	
		Volume Liquid Ideal gas	0.172 scf/gal	20.8

This hexanes plus fraction may be applied in place of published C6+ factors. The Z & GPM need additional calc for C6+ factors.

#DIV/0 or 0 (zero) will appear in this section when there is no hexanes plus in the sample to calculate C6+ factors.

ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY:	**05-045-19132**	NAME/DESCRIP :	**SGV FEDERAL #8-11C (8D)**
LEASE #:	**300115258, COC-58670**		**BRAIDEN HEAD**
FIELD/AREA:	**PARACHUTE - #67350**		
PROJECT NO. :	**202405084**	ANALYSIS NO. :	**06**
COMPANY NAME :	**CAERUS OIL & GAS LLC**	ANALYSIS DATE:	MAY 28, 2024 15:46
OFFICE / BRANCH:	PARACHUTE, CO	SAMPLE DATE :	MAY 9, 2024 9:00
CUSTOMER REF:		TO:	
PRODUCER :	CAERUS PICEANCE LLC	EFFECTIVE DATE:	

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

SAMPLE CYCLE:			SAMPLE TYPE:	SPOT	
SAMPLE PRES. :	49	psig	PROBE :	NO	
FLOW PRES. :		psig	CYLINDER NO. :	ECA-700	
LAB PRES:		psig	SAMPLED BY :	ALEX GALLEGOS	
SAMPLE TEMP. :	49	°f	SAMPLING COMPANY:	CAERUS OIL & GAS LLC	
AMBIENT TEMP.:		°f	H2S BY STAIN TUBE:	_	ppm mol
H2O BY STAIN TUBE:	-	#/mmcf	CO2 BY STAIN TUBE:	-	Mol %

FIELD COMMENTS:

LAB COMMENTS:

COMPONENTS	NORM. MOLE%	GPM @ 14.65	d13C ‰ VPDB	dD ‰ VSMOW
HELIUM	0.00	-	-	-
HYDROGEN	0.03	-	-	-
OXYGEN/ARGON	0.00	-	-	-
NITROGEN	0.12	-	-	-
CO2	0.02	-	-0.4	-
METHANE	91.30	-	-38.3	-183
ETHANE	5.47	1.4611	-27.6	-
PROPANE	1.74	0.4777	-25.7	-
ISOBUTANE	0.33	0.1039	-26.1	-
N-BUTANE	0.36	0.1129	-25.3	-
ISOPENTANE	0.14	0.0470	-26.0	-
N-PENTANE	0.09	0.0330	-24.6	-
HEXANES+	0.41	0.1389	-	-
TOTAL	100.00	2.3745		

BTU @ 60 DEG F	**14.65**	
GROSS DRY REAL =	1110.5	**/scf**
GROSS SATURATED REAL =	1091.1	**/scf**

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F)	0.6204
GRAVITY (LB/SCF)	0.04735
COMPRESSIBILITY FACTOR :	0.99750

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 #: **202405084-06-A-147**
The Isotopic Data File #: **DIG-035595**

Note:Stable isotope results based on multi-point laboratory calibration
Presicion $\delta^{13}C$ < 0.5 ‰ **Precision δD < 5.0 ‰**
Values in red represent low peak heights. Interpret with caution.