



*P. O. Box 7192 (zip 71137-7192)
1000 Grimmer Dr.
Shreveport, LA 71107
Phone: (318) 222-2424
Fax: (318) 222-2425*

November 8, 2018

Mr. Keith Lorenz
Senior Environmental Specialist
Comstock Resources, Inc
5300 Town and Country Blvd
Frisco, Texas 75034

Re: LDNR-Gas Sampling Project
Comstock Oil & Gas-LA, LLC.
Mason 21 HZ #1 ALT - Serial Number: 242184
Section 21, Township 13 N, Range 15 W
SONRIS GPS (Production Well): 32.09453462, -93.91144745

Dear Mr. Lorenz:

Approach Environmental, LLC (Approach Environmental) was retained by the Comstock Oil & Gas-LA, LLC. (Comstock) to collect natural gas samples from the referenced well. On August 2, 2018, Approach Environmental collected the gas samples from the referenced well for analysis of specific parameters as established by Louisiana Department of Natural Resources (LDNR).

The gas sampling activities included photo documentation of the well, obtaining GPS Coordinates (Via SONRIS), gas sampling, and preparation of a brief letter report presenting the analytical data. The gas sample was collected by Approach Environmental's Environmental Specialist using laboratory-specific containers in accordance with laboratory and method-specific sampling protocol. The gas samples were collected from the well surface casing and the well tubing via laboratory supplied, decontaminated cylinders capable of holding 1800 pounds of pressure per square inch (psi). Proper procedures included checking the pressure of the well or line to insure the pressure is below 1800 psi. Subsequently, the caps were removed from both ends of the cylinder, cleaned off, and the threads wrapped with Teflon tape. After wrapping the threads, the sampling port was then cracked until a small amount of gas was heard venting from the sampling point and was allowed to purge for approximately twenty (20) seconds. The cylinder was then attached to the sampling valve and snugged tight with a wrench. The valve was, then, opened for approximately 5-10 seconds to allow the cylinder to be pressurized up to the well pressure. After the cylinder was pressurized, the valve was closed and the outlet valve was opened on the cylinder to allow the gas to vent and purge the cylinder. This step was repeated three (3) times to allow for proper purging of the

cylinder. After purging the cylinder, the cylinder was once again pressurized, but for 20-30 seconds then closed off to trap the gas sample. All valves were, then, closed off and the cylinder was removed and labeled with the proper well and sampling documentation. Samples were, then, properly packaged and sent to ISOTECH Laboratory, an ISO 9001:2008 Certified company, for samples to be run by analytical methods NG2 Suite and Gas Comp., d13C of Methane, Ethane, Propane, and plus dD of Methane. Samples were also sent to Element laboratory, an ISO 17025, ISO 17020, ISO 17065, ISO 9001, AS 9100 and Nadcap accredited lab, for Extended Gas Analysis according to GPA method 2261 and 2286. The samples were submitted to each laboratory with chain-of-custody documentation.

The well surface casing gas sample was collected from a valve on the surface casing with a recorded pressure of approximately 120 psi according to Element Lab.

The well tubing gas sample was collected immediately downstream from the separator with a recorded pressure of approximately 900 psi according to Element Lab.

Photographs are shown below for future reference and the analytical laboratory report is attached for review and future reference.

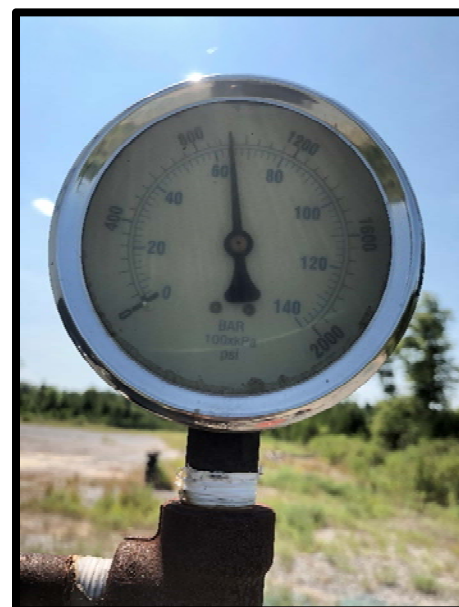
Photographs taken by John Maggio on August 2, 2018.



Mason 21 HZ # 1 well sign



Gauge on well surface casing



Gauge on well tubing on separator

Should you have any questions and/or comments, please do not hesitate to contact me at (318) 222-2424, via my cell at (318) 401-0085, or via e-mail at marksm@approachenv.com.

Sincerely,



Mark S. Moore
Approach Environmental, L.L.C.

Encl./

Attachments Table of Contents

Analytical Data Report

SEND DATA TO:

 Name: Mark Moore
 Company: Approach Environmental
 Address: 151 Freestate Blvd. Suite B
 City/State: Shreveport, LA 71107
 Phone: 318-222-2424
 Email: marksm@approachenv.com
SEND INVOICE TO: (if different from SEND DATA TO:)

 Name: SAME
 Company: SAME
 Address: P.O. Box 7192
 City/State: Shreveport, LA 71137-7192
 Phone: SAME
 Email: SAME

Project: <u>Comstock Oil + Gas</u>	Purchase Order #:
Location: <u>DESO TO PARISH</u>	Sampled By: <u>JOHN MAGNID</u>

 Select One: Standard Priority Rush

WILL SN # 042184

Container Number	Sample Identification	Date Sampled	Time	Analyses Requested			Comments
				NC2 Suite and Gas Comp.	dl3C of Meth., eth., prop.	plus dD of Methane	
3142	MASON 21HZ #1 ALT (SURFACE CASING)	8/2/16	15:30	X	X	X	Meth=methane; Eth=Ethane; Prop=Propane
3141	MASON 21HZ #1 ALT (WELL TOB) PG	8/2/16	15:40	X	X	X	

Chain-of-Custody Record

Signature	Company	Date	Time
Relinquished by <u>[Signature]</u>	<u>APPROACH ENV.</u>	<u>8/3/18</u>	<u>8:30</u>
Received by <u>RNL CATERIETS</u>		<u>8/3/18</u>	<u>8:30</u>
Relinquished by		<u>AUG 08 2018</u>	<u>12:35</u>
Received by <u>Abby L. Skube / Isotech Laboratories</u>			
Relinquished by			
Received by			



Lab #: 676750 Job #: 39164 IS-99404 Co. Job#: _____
 Sample Name: Mason 21HZ #1 ALT Surface Casing Co. Lab#: _____
 Company: Approach Environmental, LLC Cylinder: 3142
 API/Well: _____
 Container: Cylinder
 Field/Site Name: Comstock Oil & Gas
 Location: Desoto Parish
 Formation: _____
 Sampling Point: _____
 Date Sampled: 8/02/2018 15:30 Date Received: 8/08/2018 Date Reported: 10/17/2018

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	0.0309			
Hydrogen -----	nd			
Argon -----	0.0132			
Oxygen -----	nd			
Nitrogen -----	2.64			
Carbon Dioxide -----	0.017			
Methane -----	93.33	-39.55	-148.9	
Ethane -----	2.38	-25.32		
Ethylene -----	0.0005			
Propane -----	0.874	-24.83		
Propylene -----	0.0002			
Iso-butane -----	0.296			
N-butane -----	0.254			
Iso-pentane -----	0.0925			
N-pentane -----	0.0446			
Hexanes + -----	0.0267			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1036
 Specific gravity, calculated: 0.596

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.

Lab #: 676751 Job #: 39164 IS-99404 Co. Job#: _____
 Sample Name: Mason 21HZ #1 ALT Well Casing Co. Lab#: _____
 Company: Approach Environmental, LLC
 API/Well: _____
 Container: Cylinder
 Field/Site Name: Comstock Oil & Gas
 Location: Desoto Parish
 Formation: _____
 Sampling Point: _____
 Date Sampled: 8/02/2018 15:40 Date Received: 8/08/2018 Date Reported: 10/17/2018

Component	Chemical mol. %	$\delta^{13}\text{C}$ ‰	δD ‰	$\delta^{15}\text{N}$ ‰
Carbon Monoxide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	nd			
Oxygen -----	0.051			
Nitrogen -----	0.22			
Carbon Dioxide -----	2.25			
Methane -----	96.99	-36.51	-147.1	
Ethane -----	0.458	-27.68		
Ethylene -----	nd			
Propane -----	0.0223			
Propylene -----	nd			
Iso-butane -----	0.0023			
N-butane -----	0.0029			
Iso-pentane -----	0.0004			
N-pentane -----	0.0003			
Hexanes + -----	0.0009			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 992

Specific gravity, calculated: 0.579

Remarks: Insufficient C3 concentrations for isotopic analysis.

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. All gas component carbon isotope values are reported on a scale defined by a two point calibration of LSVEC and NBS 19. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.



element™

Chain of Custody

Laboratory Number:

Client Information:
 Company Name: APPROACH ENV.
 Contact Name: MARK WOOD
 Address: 51 PROSTATE BLD. P.O. BOX 7192 SUITE B
 City, State Zip: SHARROPP LA 71077 SHARROPP 7137-7192
 Phone Number: 318-401-0065 Ext: 318-202-2425
 Fax Number: 318-202-2425
 E-mail: marksm@approachenv.com
 Address:

Billing Information:
 Billing Information: SAME
 PO Number:
 Quote Number:
 Required QC Level: Bill Monthly
 Bill Monthly: Yes No

Project Name/Number:
 Project Name/Number: Constock Oil Fields
 Sampler's Signature: [Signature]
 Shipping Method: UPS / FedEx / NOW
 DHL / Element / Hand / Mail

Page 1 **of** 1
Matrix Code
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Which Regulations Apply:
 RCRA Drinking Water
 POTW Distribution
 NPDES Special
 USDA/FDA State
 RECAP/RISC Other

Turn Time
 Standard RUSH
 1 Day 2 Day Other

(Rush turn times will incur a surcharge and must be pre-approved by lab.)

Sample ID/Description	Collection Information		Matrix	Quantity	Container Type P=Plastic, G=Glass, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests	Comments
	Date	Time						
(MAX) 21HZ #1 ALT SURFACE CASING	8/2/16	15:30	GLAB NLG	1	CNSTR	X		
(MAX) 21HZ #1 ALT WELL TUBING	8/2/16	15:40	GLAB NLG	1	CNSTR	X		

Relinquished by: [Signature] **Date/Time:** 8/3/16
Received by: [Signature] **Date/Time:** 8-3-16 9:20am
 Field Notes: WILL SN# 242184
 Received at lab on ice? Yes No Temp:

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

9301 Innovation Drive, Suite 115 Daleville, IN 47334-0569 USA P 765-378-4103 F 765-378-4109
 629 Washington St. Suite 300 Columbus, IN 47201-6231 USA P 812-375-0531 F 812-375-0731
 2121 East Washington Boulevard Fort Wayne, IN 46803-1328 USA P 260-471-7000 F 260-471-7777
 909 Executive Dr Warsaw, IN 46803-2368 USA P 574-267-3305 F 574-269-6569
 3371 Cleveland Road, Suite 100A South Bend, IN 46828-9780 USA P 574-277-0707 F 574-273-6699
 2417 W. Pinhook Rd Lafayette, LA 70508-3344 USA P 337-233-0483 F 337-233-6540



Element Materials Technology
 2129 West Willow Street
 Scott, LA
 70583-5301 USA

P 337 232 3568
 F 337 232 3621
 T 888 786 7555
 info.scott@element.com
 element.com

GRAVIMETRIC CERTIFICATE

ELEMENT
 APRIL

CUSTOM GRAVIMETRIC BLEND

ELEMENT

DATE: July 19, 2017
 ORDER NUMBER: n/a

CYL NO: 53488AW

QC NO: 071817-JL4
 SCF = 16.9

COMPONENT	REQUESTED MOLE %	ACTUAL MOLE %	ACTUAL WT %
HEXANES + ELEMENT III	0.303	0.303	1.402
N-PENTANE	0.500	0.500	1.848
ISOPENTANE	0.500	0.500	1.848
N-BUTANE	1.000	1.000	2.980
ISOBUTANE	1.000	0.998	2.974
PROPANE	3.000	2.999	6.779
ETHANE	1.500	1.499	2.310
CARBON DIOXIDE	1.740	1.735	3.913
NITROGEN	2.520	2.535	3.639
METHANE	87.937	87.931	72.307

TOTAL	100.000	100.000	100.000
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MOLECULAR WEIGHT:	19.5092				
COMPRESSIBILITY FACTOR:	0.9973	BTU :	14.696	14.650	14.730 15.025
SPECIFIC GRAVITY (IDEAL) :	0.6736	IDEAL :	1110.1	1106.6	1112.7 1135.0
SPECIFIC GRAVITY (REAL) :	0.6754	REAL :	1113.1	1109.6	1115.7 1138.0
CGA	510	PSIA	64	PSIG	49 DP (DEG F) : 40

DOC CONTROL #: PETRO - F009.002

Manufactured gravimetric blend with NIST traceable balance.

GPA 2261, GPA 2145 and GPA 2198

Expiration Date: NOT APPLICABLE

*C6 = 0.185
 C7 = 0.118
 0.303*

Trevor Judice Operations Manager

Gas Analysis Report No: 239444-1 -10

Reported Date: 8/8/2018

For: APPROACH ENVIRONMENTAL

Attn: MARK MOORE
 151 FREESTATE BLVD
 SUITE B
 SHREVEPORT, LA 71107

Sample Identification:

Company: APPROACH ENVIRONMENTAL
Field: COMSTOCK O&G-BETHANY LS
Lease: MASON 21HZ #1
STA # : 242184

Sample Data: **Date Collected:** 08/02/2018 03:30 PM **Date Received:** 08/06/2018 **By:** JOHN MAGGIO
PSIG: 120 **Temp:** N/P **DEG. F.**

Remarks: SURFACE CASING

CYL # 89168

Sample Type: SPOT

Analyst: GG

Hydrocarbon Analysis - GPA 2261-13

Component Name	Mol Percent	GPM @ 14.730 PSIA
Carbon Dioxide (CO2)	0.015	
Nitrogen (N2)	2.624	
Methane (C1)	93.366	
Ethane (C2)	2.372	0.636
Propane (C3)	0.864	0.239
Iso-Butane (IC4)	0.300	0.098
N-Butane (NC4)	0.263	0.083
Iso-Pentane (IC5)	0.098	0.036
N-Pentane (NC5)	0.050	0.018
Hexanes Plus (C6+)	0.048	0.021
Total	100.000	

Mol Weight: 17.29
BTU/LB: 22677.91

Ethane + GPM: 1.131
Propane + GPM: 0.495
Iso-Pentane + GPM: 0.075

Compressibility Factor: 0.9978
Specific Gravity @ 60 Deg. F. (Air = 1) : 0.598

BTU/Cuft. (Real) 60 Deg. F. - PSIA:	14.650	14.696	14.730	15.025
Dry:	1032.4	1035.7	1038.1	1058.9
Sat:	1014.8	1017.9	1020.3	1040.8

Reviewed By: 
 Tina Venable, Customer Service Representative
 Data Reviewer

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 2129 W. Willow St. Scott, LA 70583 337-232-3568



Gas Analysis Report No: 239444

239444-1 -20

Date: 8/8/2018

For: APPROACH ENVIRONMENTAL

Attn: MARK MOORE
151 FREESTATE BLVD
SUITE B
SHREVEPORT, LA 71107

Sample Identification:

Company: APPROACH ENVIRONMENTAL
Field: COMSTOCK O&G-BETHANY LS
Lease: MASON 21HZ #1

STA # : 242184

239444-1

**CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE**

COMPONENT NAME	MOL %	WEIGHT %
METHANE	0.0000	0.0000
ETHANE	0.0000	0.0000
PROPANE	0.0000	0.0000
ISO-BUTANE	0.0000	0.0000
N-BUTANE	0.0000	0.0000
2,2-DIMETHYLPROPANE (NEOPENTANE)	0.0000	0.0000
ISOPENTANE	0.0000	0.0000
N-PENTANE	0.0000	0.0000
2,2-DIMETHYLBUTANE (NEOHEXANE)	0.0030	0.0139
2,3-DIMETHYLBUTANE CYCLOPENTANE	0.0025	0.0104
2-METHYLPENTANE	0.0114	0.0526
3-METHYLPENTANE	0.0042	0.0196
N-HEXANE	0.0061	0.0280
2,2-DIMETHYLPENTANE	0.0004	0.0020
METHYLCYCLOPENTANE	0.0005	0.0024
2,4-DIMETHYLPENTANE	0.0003	0.0014
2,2,3-TRIMETHYLBUTANE	0.0001	0.0004
BENZENE	0.0001	0.0005
3,3-DIMETHYLPENTANE	0.0001	0.0006
CYCLOHEXANE	0.0003	0.0011
2-METHYLHEXANE	0.0010	0.0052
2,3-DIMETHYLPENTANE	0.0002	0.0013
1,1-DIMETHYLCYCLOPENTANE 3-METHYLHEXANE	0.0008	0.0043

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
1,t3-DIMETHYLCYCLOPENTANE	0.0001	0.0003
1,c3-DIMETHYLCYCLOPENTANE 3-ETHYLPENTANE	0.0001	0.0005
1,t2-DIMETHYLCYCLOPENTANE 2,2,4-TRIMETHYLPENTANE	0.0001	0.0005
N-HEPTANE	0.0008	0.0043
METHYLCYCLOHEXANE 1,1,3-TRIMETHYLCYCLOPENTANE 2,2-DIMETHYLHEXANE	0.0005	0.0026
1,C2-DIMETHYLCYCLOPENTANE	0.0000	0.0000
2,5-DIMETHYLHEXANE	0.0001	0.0006
2,4-DIMETHYLHEXANE 2,2,3-TRIMETHYLPENTANE ETHYLCYCLOPENTANE	0.0001	0.0008
1,t2,c4-TRIMETHYLCYCLOPENTANE 3,3-DIMETHYLHEXANE	0.0001	0.0004
1,t2,C3-TRIMETHYLCYCLOPENTANE	0.0000	0.0001
2,3,4-TRIMETHYLPENTANE	0.0000	0.0001
TOLUENE	0.0002	0.0008
2,3-DIMETHYLHEXANE	0.0001	0.0004
1,1,2-TRIMETHYLCYCLOPENTANE	0.0000	0.0001
2-METHYLHEPTANE	0.0004	0.0023
4-METHYLHEPTANE	0.0001	0.0006
3,4-DIMETHYLHEXANE	0.0000	0.0002
3-METHYLHEPTANE 3-ETHYLHEXANE	0.0004	0.0024
1,c3-DIMETHYLCYCLOHEXANE 1,c2,t3-TRIMETHYLCYCLOPENTANE	0.0001	0.0008
1,c2,t4-TRIMETHYLCYCLOPENTANE		
1,t4-DIMETHYLCYCLOHEXANE	0.0001	0.0004
2,2,5-TRIMETHYLHEXANE	0.0000	0.0002
1,1-DIMETHYLCYCLOHEXANE 1,methyl-t3-ETHYLCYCLOPENTANE	0.0001	0.0004
1-methyl-C3-ETHYLCYCLOPENTANE	0.0000	0.0000
1-methyl-t2-ETHYLCYCLOPENTANE 2,2,4-TRIMETHYLHEXANE	0.0001	0.0004
1-methyl-1-ETHYLCYCLOPENTANE CYCLOHEPTANE	0.0008	0.0047
N-OCTANE		
1,T2-DIMETHYLCYCLOCHEXANE	0.0000	0.0001
UNKNOWN	0.0000	0.0001
1,t3-DIMETHYLCYCLOHEXANE 1,c4-DIMETHYLCYCLOHEXANE	0.0001	0.0004
1,c2,c3-TRIMETHYLCYCLOPENTANE		
2,4,4-TRIMETHYLHEXANE	0.0000	0.0000
ISOPROPYLCYCLOPENTANE	0.0000	0.0001

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
UNKNOWN	0.0000	0.0001
2,2-DIMETHYLHEPTANE	0.0000	0.0003
2,4-DIMETHYLHEPTANE	0.0001	0.0006
1-methyl-c2-ETHYLCYCLOPENTANE		
2,2,3-TRIMETHYLHEXANE	0.0000	0.0000
1,c2-DIMETHYLCYCLOHEXANE	0.0002	0.0012
2,6-DIMETHYLHEPTANE		
N-PROPYLCYCLOPENTANE	0.0001	0.0005
1,c3,c5-TRIMETHYLCYCLOHEXANE		
2,5-DIMETHYLHEPTANE	0.0005	0.0032
3,5-DIMETHYLHEPTANE		
ETHYLCYCLOHEXANE		
1,1,3-TRIMETHYLCYCLOHEXANE	0.0001	0.0010
2,3,3-TRIMETHYLHEXANE		
3,3-DIMETHYLHEPTANE		
1,1,4-TRIMETHYLCYCLOHEXANE	0.0001	0.0004
UNKNOWN	0.0000	0.0000
2,3,4-TRIMETHYLHEXANE	0.0000	0.0002
ETHYLBENZENE	0.0001	0.0005
1,t2,t4-TRIMETHYLCYCLOHEXANE	0.0003	0.0020
1,c3,t5-TRIMETHYLCYCLOHEXANE		
2,3-DIMETHYLHEPTANE		
M-XYLENE	0.0004	0.0020
P-XYLENE		
3,4-DIMETHYLHEPTANE		
2-METHYLOCTANE	0.0011	0.0074
4-METHYLOCTANE		
UNKNOWN	0.0000	0.0002
3-METHYLOCTANE	0.0008	0.0054
UNKNOWN	0.0001	0.0005
1,t2,c3-TRIMETHYLCYCLOHEXANE	0.0001	0.0010
1,t2,c4-TRIMETHYLCYCLOHEXANE		
O-XYLENE	0.0001	0.0007
1,1,2-TRIMETHYLCYCLOHEXANE	0.0003	0.0021
UNKNOWN	0.0001	0.0010
ISOBUTYLCYCLOPENTANE	0.0001	0.0007
N-NONANE	0.0016	0.0109
UNKNOWN	0.0000	0.0000
1,c2,c3-TRIMETHYLCYCLOHEXANE	0.0003	0.0023
1,c2,t3-TRIMETHYLCYCLOHEXANE		
UNKNOWN	0.0000	0.0000
ISOPROPYLBENZENE	0.0002	0.0013
2,2-DIMETHYLOCTANE	0.0000	0.0000
ISOPROPYLCYCLOHEXANE	0.0004	0.0026
CYCLOOCTANE		
UNKNOWN	0.0000	0.0004

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
N-BUTYLCYCLOPENTANE N-PROPYLCYCLOHEXANE	0.0008	0.0051
3,3-DIMETHYLOCTANE	0.0000	0.0003
UNKNOWN	0.0002	0.0015
N-PROPYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
M-ETHYLTOLUENE	0.0000	0.0000
P-ETHYLTOLUENE 2,3-DIMETHYLOCTANE	0.0005	0.0032
4-METHYLNONANE 5-METHYLNONANE 1,3,5-TRIMETHYLBENZENE	0.0000	0.0000
2-METHYLNONANE	0.0009	0.0071
3-ETHYLOCTANE	0.0002	0.0015
O-ETHYLTOLUENE 3-METHYLNONANE	0.0004	0.0028
UNKNOWN	0.0000	0.0000
1,2,4-TRIMETHYLBENZENE t-BUTYLBENZENE METHYLCYCLOOCTANE	0.0000	0.0000
tert-BUTYLCYCLOHEXANE	0.0003	0.0026
ISO-BUTYLCYCLOHEXANE	0.0001	0.0006
N-DECANE	0.0011	0.0086
ISOBUTYLBENZENE	0.0000	0.0003
sec-BUTYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1-METHYL-3-ISOPROPYLBENZENE	0.0000	0.0000
1,2,3-TRIMETHYLBENZENE 1-METHYL-4-ISOPROPYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1-METHYL-2-ISOPROPYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
N-BUTYLCYCLOHEXANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,3-DIETHYLBENZENE 1-METHYL-3-PROPYLBENZENE	0.0000	0.0000
1,2-DIETHYLBENZENE N-BUTYLBENZENE 1-METHYL-4-PROPYLBENZENE	0.0000	0.0000
1,4-DIETHYLBENZENE	0.0000	0.0000
1-METHYL-2-PROPYLBENZENE	0.0000	0.0000
1,4-DIMETHYL-2-ETHYLBENZENE	0.0000	0.0001
UNKNOWN	0.0000	0.0000

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
1,2-DIMETHYL-4-ETHYLBENZENE	0.0000	0.0000
1,3-DIMETHYL-2-ETHYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,2-DIMETHYL-3-ETHYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
N-UNDECANE	0.0003	0.0027
UNKNOWN	0.0000	0.0000
1,2,4,5-TETRAMETHYLBENZENE	0.0002	0.0015
1,2,3,5-TETRAMETHYLBENZENE	0.0003	0.0019
UNKNOWN	0.0000	0.0000
1,2,3,4-TETRAMETHYLBENZENE CYCLODECANE	0.0001	0.0010
UNKNOWN	0.0000	0.0000
NAPHTHALENE	0.0000	0.0000
N-DODECANE	0.0000	0.0000
ISOTRIDECANES PLUS	0.0000	0.0000
Total:	0.0480	0.2580

TOTAL HEXANES	0.0271	0.1245
TOTAL HEPTANES	0.0048	0.0249
TOTAL OCTANES	0.0031	0.0186
TOTAL NONANES	0.0064	0.0425
TOTAL DECANES PLUS	0.0066	0.0475

BTEX COMPONENTS

N-HEXANE	0.0061	0.0280
BENZENE	0.0001	0.0005
TOLUENE	0.0002	0.0008
ETHYLBENZENE	0.0001	0.0005
XYLENE	0.0005	0.0027

239444-1
**CAPILLARY ANALYSIS - METHOD GPA 2286-95
 HEAVY END FRACTION**

COMPONENT NAME	MOL %	WEIGHT %
METHANE	0.000	0.000
ETHANE	0.000	0.000
PROPANE	0.000	0.000
ISO-BUTANE	0.000	0.000
N-BUTANE	0.000	0.000
2,2-DIMETHYLPROPANE (NEOPENTANE)	0.000	0.000
ISOPENTANE	0.000	0.000
N-PENTANE	0.000	0.000
2,2-DIMETHYLBUTANE (NEOHEXANE)	6.278	5.404
2,3-DIMETHYLBUTANE	5.141	4.013
CYCLOPENTANE		
2-METHYLPENTANE	23.687	20.391
3-METHYLPENTANE	8.804	7.579
N-HEXANE	12.626	10.869
2,2-DIMETHYLPENTANE	0.760	0.761
METHYLCYCLOPENTANE	1.122	0.944
2,4-DIMETHYLPENTANE	0.553	0.554
2,2,3-TRIMETHYLBUTANE	0.172	0.172
BENZENE	0.269	0.210
3,3-DIMETHYLPENTANE	0.232	0.232
CYCLOHEXANE	0.521	0.438
2-METHYLHEXANE	2.007	2.009
2,3-DIMETHYLPENTANE	0.504	0.504
1,1-DIMETHYLCYCLOPENTANE	1.667	1.665
3-METHYLHEXANE		
1,t3-DIMETHYLCYCLOPENTANE	0.136	0.134
1,c3-DIMETHYLCYCLOPENTANE	0.196	0.193
3-ETHYLPENTANE		
1,t2-DIMETHYLCYCLOPENTANE	0.205	0.204
2,2,4-TRIMETHYLPENTANE		
N-HEPTANE	1.650	1.652
METHYLCYCLOHEXANE	1.028	1.023
1,1,3-TRIMETHYLCYCLOPENTANE		

CAPILLARY ANALYSIS - METHOD GPA 2286-95
HEAVY END FRACTION

COMPONENT NAME	MOL %	WEIGHT %
2,2-DIMETHYLHEXANE		
1,C2-DIMETHYLCYCLOPENTANE	0.014	0.014
2,5-DIMETHYLHEXANE	0.208	0.237
2,4-DIMETHYLHEXANE	0.310	0.319
2,2,3-TRIMETHYLPENTANE		
ETHYLCYCLOPENTANE		
1,t2,c4-TRIMETHYLCYCLOPENTANE	0.129	0.145
3,3-DIMETHYLHEXANE		
1,t2,C3-TRIMETHYLCYCLOPENTANE	0.044	0.049
2,3,4-TRIMETHYLPENTANE	0.039	0.044
TOLUENE	0.349	0.321
2,3-DIMETHYLHEXANE	0.129	0.148
1,1,2-TRIMETHYLCYCLOPENTANE	0.043	0.048
2-METHYLHEPTANE	0.798	0.910
4-METHYLHEPTANE	0.210	0.239
3,4-DIMETHYLHEXANE	0.063	0.072
3-METHYLHEPTANE	0.821	0.937
3-ETHYLHEXANE		
1,c3-DIMETHYLCYCLOHEXANE	0.292	0.328
1,c2,t3-TRIMETHYLCYCLOPENTANE		
1,c2,t4-TRIMETHYLCYCLOPENTANE		
1,t4-DIMETHYLCYCLOHEXANE	0.135	0.152
2,2,5-TRIMETHYLHEXANE	0.049	0.063
1,1-DIMETHYLCYCLOHEXANE	0.129	0.145
1,methyl-t3-ETHYLCYCLOPENTANE		
1-methyl-C3-ETHYLCYCLOPENTANE	0.000	0.000
1-methyl-t2-ETHYLCYCLOPENTANE	0.127	0.153
2,2,4-TRIMETHYLHEXANE		
1-methyl-1-ETHYLCYCLOPENTANE	1.596	1.821
CYCLOHEPTANE		
N-OCTANE		
1,T2-DIMETHYLCYCLOHEXANE	0.022	0.025
UNKNOWN	0.035	0.045
1,t3-DIMETHYLCYCLOHEXANE	0.152	0.171
1,c4-DIMETHYLCYCLOHEXANE		
1,c2,c3-TRIMETHYLCYCLOPENTANE		
2,4,4-TRIMETHYLHEXANE	0.000	0.000
ISOPROPYLCYCLOPENTANE	0.039	0.043
UNKNOWN	0.035	0.045
2,2-DIMETHYLHEPTANE	0.078	0.099
2,4-DIMETHYLHEPTANE	0.207	0.249
1-methyl-c2-ETHYLCYCLOPENTANE		
2,2,3-TRIMETHYLHEXANE	0.000	0.000

CAPILLARY ANALYSIS - METHOD GPA 2286-95
HEAVY END FRACTION

COMPONENT NAME	MOL %	WEIGHT %
1,c2-DIMETHYLCYCLOHEXANE	0.413	0.476
2,6-DIMETHYLHEPTANE		
N-PROPYLCYCLOPENTANE	0.163	0.194
1,c3,c5-TRIMETHYLCYCLOHEXANE		
2,5-DIMETHYLHEPTANE	1.079	1.227
3,5-DIMETHYLHEPTANE		
ETHYLCYCLOHEXANE		
1,1,3-TRIMETHYLCYCLOHEXANE	0.292	0.371
2,3,3-TRIMETHYLHEXANE		
3,3-DIMETHYLHEPTANE		
1,1,4-TRIMETHYLCYCLOHEXANE	0.108	0.137
UNKNOWN	0.000	0.000
2,3,4-TRIMETHYLHEXANE	0.054	0.069
ETHYLBENZENE	0.201	0.213
1,t2,t4-TRIMETHYLCYCLOHEXANE	0.620	0.782
1,c3,t5-TRIMETHYLCYCLOHEXANE		
2,3-DIMETHYLHEPTANE		
M-XYLENE	0.729	0.777
P-XYLENE		
3,4-DIMETHYLHEPTANE		
2-METHYLOCTANE	2.230	2.857
4-METHYLOCTANE		
UNKNOWN	0.066	0.093
3-METHYLOCTANE	1.640	2.101
UNKNOWN	0.126	0.179
1,t2,c3-TRIMETHYLCYCLOHEXANE	0.293	0.370
1,t2,c4-TRIMETHYLCYCLOHEXANE		
O-XYLENE	0.238	0.252
1,1,2-TRIMETHYLCYCLOHEXANE	0.633	0.798
UNKNOWN	0.286	0.407
ISOBUTYLCYCLOPENTANE	0.227	0.286
N-NONANE	3.302	4.231
UNKNOWN	0.000	0.000
1,c2,c3-TRIMETHYLCYCLOHEXANE	0.709	0.894
1,c2,t3-TRIMETHYLCYCLOHEXANE		
UNKNOWN	0.007	0.010
ISOPROPYLBENZENE	0.423	0.507
2,2-DIMETHYLOCTANE	0.000	0.000
ISOPROPYLCYCLOHEXANE	0.856	1.019
CYCLOOCTANE		
UNKNOWN	0.104	0.140
N-BUTYLCYCLOPENTANE	1.566	1.975
N-PROPYLCYCLOHEXANE		
3,3-DIMETHYLOCTANE	0.081	0.115

CAPILLARY ANALYSIS - METHOD GPA 2286-95
HEAVY END FRACTION

COMPONENT NAME	MOL %	WEIGHT %
UNKNOWN	0.426	0.571
N-PROPYLBENZENE	0.000	0.000
UNKNOWN	0.000	0.000
M-ETHYLTOLUENE	0.000	0.000
P-ETHYLTOLUENE	1.031	1.238
2,3-DIMETHYLOCTANE		
4-METHYLNONANE	0.000	0.000
5-METHYLNONANE		
1,3,5-TRIMETHYLBENZENE		
2-METHYLNONANE	1.936	2.750
3-ETHYLOCTANE	0.411	0.585
O-ETHYLTOLUENE	0.817	1.071
3-METHYLNONANE		
UNKNOWN	0.000	0.000
1,2,4-TRIMETHYLBENZENE	0.000	0.000
t-BUTYLBENZENE		
METHYLCYCLOOCTANE		
tert-BUTYLCYCLOHEXANE	0.718	1.006
ISO-BUTYLCYCLOHEXANE	0.171	0.240
N-DECANE	2.349	3.338
ISOBUTYLBENZENE	0.094	0.127
sec-BUTYLBENZENE	0.000	0.000
UNKNOWN	0.000	0.000
1-METHYL-3-ISOPROPYLBENZENE	0.000	0.000
1,2,3-TRIMETHYLBENZENE	0.000	0.000
1-METHYL-4-ISOPROPYLBENZENE		
UNKNOWN	0.000	0.000
1-METHYL-2-ISOPROPYLBENZENE	0.000	0.000
UNKNOWN	0.000	0.000
N-BUTYLCYCLOHEXANE	0.000	0.000
UNKNOWN	0.000	0.000
1,3-DIETHYLBENZENE	0.000	0.000
1-METHYL-3-PROPYLBENZENE		
1,2-DIETHYLBENZENE	0.000	0.000
N-BUTYLBENZENE		
1-METHYL-4-PROPYLBENZENE		
1,4-DIETHYLBENZENE	0.000	0.000
1-METHYL-2-PROPYLBENZENE	0.000	0.000
1,4-DIMETHYL-2-ETHYLBENZENE	0.023	0.031
UNKNOWN	0.000	0.000
1,2-DIMETHYL-4-ETHYLBENZENE	0.000	0.000

**CAPILLARY ANALYSIS - METHOD GPA 2286-95
HEAVY END FRACTION**

COMPONENT NAME	MOL %	WEIGHT %
1,3-DIMETHYL-2-ETHYLBENZENE	0.000	0.000
UNKNOWN	0.000	0.000
1,2-DIMETHYL-3-ETHYLBENZENE	0.000	0.000
UNKNOWN	0.000	0.000
N-UNDECANE	0.672	1.049
UNKNOWN	0.000	0.000
1,2,4,5-TETRAMETHYLBENZENE	0.443	0.594
1,2,3,5-TETRAMETHYLBENZENE	0.556	0.746
UNKNOWN	0.000	0.000
1,2,3,4-TETRAMETHYLBENZENE	0.293	0.402
CYCLODECANE		
UNKNOWN	0.000	0.000
NAPHTHALENE	0.000	0.000
N-DODECANE	0.000	0.000
ISOTRIDECANES PLUS	0.000	0.000
Total:	100.000	100.000

Specific Gravity @ 60 Deg. F. (Air = 1)	3.4426
Molecular Weight	100.14
Compressibility Factor	0.8520
Summation Factor	0.1004
Cu. Ft. Vapor/Gal @ 14.696 & 60 Deg. F.	22.845
Cu. Ft. Vapor/Gal @ 14.730 & 60 Deg. F.	22.793
Cu. Ft. Vapor/Gal @ 14.650 & 60 Deg. F.	22.917
Btu/cu. Ft. @ 14.696 PSIA, Dry	5436.17
Btu/cu. Ft. @ 14.730 PSIA, Dry	5448.74
BTU/LB	20653



Gas Analysis Report No: 239444-2 -10

Reported Date: 8/8/2018

For: APPROACH ENVIRONMENTAL
 Attn: MARK MOORE
 151 FREESTATE BLVD
 SUITE B
 SHREVEPORT, LA 71107

Sample Identification:
 Company: APPROACH ENVIRONMENTAL
 Field: COMSTOCK O&G-BETHANY LS
 Lease: MASON 21HZ #1
 STA # : 242184

Sample Data: Date Collected: 08/02/2018 03:40 PM Date Received: 08/06/2018 By: JOHN MAGGIO
 PSIG: 900 Temp: N/P DEG. F.

Remarks: WELL TUBING

CYL # 2300

Sample Type: SPOT

Analyst: GG

Hydrocarbon Analysis - GPA 2261-13

Component Name	Mol Percent	GPM @ 14.730 PSIA
Carbon Dioxide (CO2)	2.253	
Nitrogen (N2)	0.043	
Methane (C1)	97.233	
Ethane (C2)	0.438	0.117
Propane (C3)	0.024	0.006
Iso-Butane (IC4)	0.003	0.001
N-Butane (NC4)	0.006	0.002
Iso-Pentane (IC5)	0.000	0.000
N-Pentane (NC5)	0.000	0.000
Hexanes Plus (C6+)	0.000	0.000
Total	100.000	

Mol Weight: 16.75 Ethane + GPM: 0.126
 BTU/LB: 22445.02 Propane + GPM: 0.009
 Iso-Pentane + GPM: 0.000

Compressibility Factor: 0.9979
 Specific Gravity @ 60 Deg. F. (Air = 1) : 0.579

BTU/Cuft. (Real) 60 Deg. F. - PSIA:	14.650	14.696	14.730	15.025
Dry:	989.6	992.7	995.0	1015.0
Sat:	972.7	975.7	978.0	997.6

Reviewed By: 
 Tina Venable, Customer Service Representative

Data Reviewer

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 2129 W. Willow St. Scott, LA 70583 337-232-3568



Gas Analysis Report No: 239444

239444-2 -20

Date: 8/8/2018

For: APPROACH ENVIRONMENTAL

Attn: MARK MOORE
151 FREESTATE BLVD
SUITE B
SHREVEPORT, LA 71107

Sample Identification:
Company: APPROACH ENVIRONMENTAL
Field: COMSTOCK O&G-BETHANY LS
Lease: MASON 21HZ #1

STA # : 242184

239444-2

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
METHANE	0.0000	0.0000
ETHANE	0.0000	0.0000
PROPANE	0.0000	0.0000
ISO-BUTANE	0.0000	0.0000
N-BUTANE	0.0000	0.0000
2,2-DIMETHYLPROPANE (NEOPENTANE)	0.0000	0.0000
ISOPENTANE	0.0000	0.0000
N-PENTANE	0.0000	0.0000
2,2-DIMETHYLBUTANE (NEOHEXANE)	0.0000	0.0000
2,3-DIMETHYLBUTANE	0.0000	0.0000
CYCLOPENTANE	0.0000	0.0000
2-METHYLPENTANE	0.0000	0.0000
3-METHYLPENTANE	0.0000	0.0000
N-HEXANE	0.0000	0.0000
2,2-DIMETHYLPENTANE	0.0000	0.0000
METHYLCYCLOPENTANE	0.0000	0.0000
2,4-DIMETHYLPENTANE	0.0000	0.0000
2,2,3-TRIMETHYLBUTANE	0.0000	0.0000
BENZENE	0.0000	0.0000
3,3-DIMETHYLPENTANE	0.0000	0.0000
CYCLOHEXANE	0.0000	0.0000
2-METHYLHEXANE	0.0000	0.0000
2,3-DIMETHYLPENTANE	0.0000	0.0000
1,1-DIMETHYLCYCLOPENTANE	0.0000	0.0000
3-METHYLHEXANE	0.0000	0.0000

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
1,t3-DIMETHYLCYCLOPENTANE	0.0000	0.0000
1,c3-DIMETHYLCYCLOPENTANE 3-ETHYLPENTANE	0.0000	0.0000
1,t2-DIMETHYLCYCLOPENTANE 2,2,4-TRIMETHYLPENTANE	0.0000	0.0000
N-HEPTANE	0.0000	0.0000
METHYLCYCLOHEXANE 1,1,3-TRIMETHYLCYCLOPENTANE 2,2-DIMETHYLHEXANE	0.0000	0.0000
1,C2-DIMETHYLCYCLOPENTANE	0.0000	0.0000
2,5-DIMETHYLHEXANE	0.0000	0.0000
2,4-DIMETHYLHEXANE 2,2,3-TRIMETHYLPENTANE ETHYLCYCLOPENTANE	0.0000	0.0000
1,t2,c4-TRIMETHYLCYCLOPENTANE 3,3-DIMETHYLHEXANE	0.0000	0.0000
1,t2,C3-TRIMETHYLCYCLOPENTANE	0.0000	0.0000
2,3,4-TRIMETHYLPENTANE	0.0000	0.0000
TOLUENE	0.0000	0.0000
2,3-DIMETHYLHEXANE	0.0000	0.0000
1,1,2-TRIMETHYLCYCLOPENTANE	0.0000	0.0000
2-METHYLHEPTANE	0.0000	0.0000
4-METHYLHEPTANE	0.0000	0.0000
3,4-DIMETHYLHEXANE	0.0000	0.0000
3-METHYLHEPTANE 3-ETHYLHEXANE	0.0000	0.0000
1,c3-DIMETHYLCYCLOHEXANE 1,c2,t3-TRIMETHYLCYCLOPENTANE	0.0000	0.0000
1,c2,t4-TRIMETHYLCYCLOPENTANE		
1,t4-DIMETHYLCYCLOHEXANE	0.0000	0.0000
2,2,5-TRIMETHYLHEXANE	0.0000	0.0000
1,1-DIMETHYLCYCLOHEXANE 1,methyl-t3-ETHYLCYCLOPENTANE	0.0000	0.0000
1-methyl-C3-ETHYLCYCLOPENTANE	0.0000	0.0000
1-methyl-t2-ETHYLCYCLOPENTANE 2,2,4-TRIMETHYLHEXANE	0.0000	0.0000
1-methyl-1-ETHYLCYCLOPENTANE CYCLOHEPTANE	0.0000	0.0000
N-OCTANE		
1,T2-DIMETHYLCYCLOCHEXANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,t3-DIMETHYLCYCLOHEXANE 1,c4-DIMETHYLCYCLOHEXANE	0.0000	0.0000
1,c2,c3-TRIMETHYLCYCLOPENTANE		
2,4,4-TRIMETHYLHEXANE	0.0000	0.0000
ISOPROPYLCYCLOPENTANE	0.0000	0.0000

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
UNKNOWN	0.0000	0.0000
2,2-DIMETHYLHEPTANE	0.0000	0.0000
2,4-DIMETHYLHEPTANE	0.0000	0.0000
1-methyl-c2-ETHYLCYCLOPENTANE	0.0000	0.0000
2,2,3-TRIMETHYLHEXANE	0.0000	0.0000
1,c2-DIMETHYLCYCLOHEXANE	0.0000	0.0000
2,6-DIMETHYLHEPTANE	0.0000	0.0000
N-PROPYLCYCLOPENTANE	0.0000	0.0000
1,c3,c5-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
2,5-DIMETHYLHEPTANE	0.0000	0.0000
3,5-DIMETHYLHEPTANE	0.0000	0.0000
ETHYLCYCLOHEXANE	0.0000	0.0000
1,1,3-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
2,3,3-TRIMETHYLHEXANE	0.0000	0.0000
3,3-DIMETHYLHEPTANE	0.0000	0.0000
1,1,4-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
2,3,4-TRIMETHYLHEXANE	0.0000	0.0000
ETHYLBENZENE	0.0000	0.0000
1,t2,t4-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
1,c3,t5-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
2,3-DIMETHYLHEPTANE	0.0000	0.0000
M-XYLENE	0.0000	0.0000
P-XYLENE	0.0000	0.0000
3,4-DIMETHYLHEPTANE	0.0000	0.0000
2-METHYLOCTANE	0.0000	0.0000
4-METHYLOCTANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
3-METHYLOCTANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,t2,c3-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
1,t2,c4-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
O-XYLENE	0.0000	0.0000
1,1,2-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
ISOBUTYLCYCLOPENTANE	0.0000	0.0000
N-NONANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,c2,c3-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
1,c2,t3-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
ISOPROPYLBENZENE	0.0000	0.0000
2,2-DIMETHYLOCTANE	0.0000	0.0000
ISOPROPYLCYCLOHEXANE	0.0000	0.0000
CYCLOOCTANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
N-BUTYLCYCLOPENTANE	0.0000	0.0000
N-PROPYLCYCLOHEXANE		
3,3-DIMETHYLOCTANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
N-PROPYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
M-ETHYLTOLUENE	0.0000	0.0000
P-ETHYLTOLUENE	0.0000	0.0000
2,3-DIMETHYLOCTANE		
4-METHYLNONANE	0.0000	0.0000
5-METHYLNONANE		
1,3,5-TRIMETHYLBENZENE		
2-METHYLNONANE	0.0000	0.0000
3-ETHYLOCTANE	0.0000	0.0000
O-ETHYLTOLUENE	0.0000	0.0000
3-METHYLNONANE		
UNKNOWN	0.0000	0.0000
1,2,4-TRIMETHYLBENZENE	0.0000	0.0000
t-BUTYLBENZENE		
METHYLCYCLOOCTANE		
tert-BUTYLCYCLOHEXANE	0.0000	0.0000
ISO-BUTYLCYCLOHEXANE	0.0000	0.0000
N-DECANE	0.0000	0.0000
ISOBUTYLBENZENE	0.0000	0.0000
sec-BUTYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1-METHYL-3-ISOPROPYLBENZENE	0.0000	0.0000
1,2,3-TRIMETHYLBENZENE	0.0000	0.0000
1-METHYL-4-ISOPROPYLBENZENE		
UNKNOWN	0.0000	0.0000
1-METHYL-2-ISOPROPYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
N-BUTYLCYCLOHEXANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,3-DIETHYLBENZENE	0.0000	0.0000
1-METHYL-3-PROPYLBENZENE		
1,2-DIETHYLBENZENE	0.0000	0.0000
N-BUTYLBENZENE		
1-METHYL-4-PROPYLBENZENE		
1,4-DIETHYLBENZENE	0.0000	0.0000
1-METHYL-2-PROPYLBENZENE	0.0000	0.0000
1,4-DIMETHYL-2-ETHYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000

CAPILLARY ANALYSIS - METHOD GPA 2286-95
COMPONENT AS % OF TOTAL SAMPLE

COMPONENT NAME	MOL %	WEIGHT %
1,2-DIMETHYL-4-ETHYLBENZENE	0.0000	0.0000
1,3-DIMETHYL-2-ETHYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,2-DIMETHYL-3-ETHYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
N-UNDECANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,2,4,5-TETRAMETHYLBENZENE	0.0000	0.0000
1,2,3,5-TETRAMETHYLBENZENE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
1,2,3,4-TETRAMETHYLBENZENE CYCLODECANE	0.0000	0.0000
UNKNOWN	0.0000	0.0000
NAPHTHALENE	0.0000	0.0000
N-DODECANE	0.0000	0.0000
ISOTRIDECANES PLUS	0.0000	0.0000
Total:	0.0000	0.0000

TOTAL HEXANES	0.0000	0.0000
TOTAL HEPTANES	0.0000	0.0000
TOTAL OCTANES	0.0000	0.0000
TOTAL NONANES	0.0000	0.0000
TOTAL DECANES PLUS	0.0000	0.0000

BTEX COMPONENTS

N-HEXANE	0.0000	0.0000
BENZENE	0.0000	0.0000
TOLUENE	0.0000	0.0000
ETHYLBENZENE		
XYLENE	0.0000	0.0000