



*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.
Derrick 21 HZ #2 ALT - Serial Number: 250110
Section 21, Township 13 N, Range 15 W
SONRIS GPS (Production Well): 32.0946965, -93.91395602

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 samples were 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 350 psi according to Element Lab.

The well tubing gas sample was collected at the tubing at the wellhead with a recorded pressure of approximately 1000 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.



Derrick 21 HZ #2 Well Head



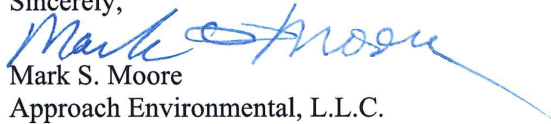
Gauge for well surface casing



Gauge for well tubing

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>DESOTO PARISH</u>	Sampled By: <u>JOHN MARCHIO</u>

 Select One: Standard Priority Rush

WELL SN # 250110

Container Number	Sample Identification	Date Sampled	Time	Analyses Requested			Comments
				NC2-Suite and Gas Comp.	d13C-of-Meth., eth., Prop.	plus dD of Methane	
3070	<u>DRILLER 21HZ #2 ALT</u> <u>WELL TABLING</u>	8/2/18	14:30	X	X	X	Meth=methane; Eth=Ethane; Prop=Propane
3163	<u>DRILLER 21HZ #2 ALT</u> <u>SURFACE CASING</u>	8/2/18	14:50	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 CARRIERS</u>		<u>8/3/18</u>	<u>8:30</u>
Relinquished by:			
Received by: <u>Abby L. Skube / Isotech Laboratories</u>		<u>AUG 08 2018</u>	<u>12:35</u>
Relinquished by:			
Received by:			



Lab #: 676746 Job #: 39164 IS-99404 Co. Job#: _____
 Sample Name: Derrick 21HZ #2 ALT Well Tubing Co. Lab#: _____
 Company: Approach Environmental, LLC Cylinder: 3070
 API/Well: _____
 Container: Cylinder
 Field/Site Name: Comstock Oil & Gas
 Location: Desoto Parish
 Formation: _____
 Sampling Point: _____
 Date Sampled: 8/02/2018 14:30 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 -----	nd			
Hydrogen -----	nd			
Argon -----	nd			
Oxygen -----	nd			
Nitrogen -----	0.042			
Carbon Dioxide -----	2.29			
Methane -----	97.19	-36.39	-146.3	
Ethane -----	0.445	-27.20		
Ethylene -----	nd			
Propane -----	0.0247			
Propylene -----	nd			
Iso-butane -----	0.0035			
N-butane -----	0.0033			
Iso-pentane -----	0.0008			
N-pentane -----	0.0005			
Hexanes + -----	0.0015			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 994

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. %.

Lab #: 676747 Job #: 39164 IS-99404 Co. Job#: _____
 Sample Name: Derrick 21HZ #2 ALT Surface Casing Co. Lab#: _____
 Company: Approach Environmental, LLC Cylinder: 3163
 API/Well: _____
 Container: Cylinder
 Field/Site Name: Comstock Oil & Gas
 Location: Desoto Parish
 Formation: _____
 Sampling Point: _____
 Date Sampled: 8/02/2018 14:50 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 -----	0.0347			
Hydrogen -----	0.154			
Argon -----	0.0351			
Oxygen -----	nd			
Nitrogen -----	4.37			
Carbon Dioxide -----	nd			
Methane -----	90.84	-39.27	-147.6	
Ethane -----	2.54	-25.20		
Ethylene -----	0.0003			
Propane -----	0.983	-24.49		
Propylene -----	0.0002			
Iso-butane -----	0.353			
N-butane -----	0.333			
Iso-pentane -----	0.159			
N-pentane -----	0.0899			
Hexanes + -----	0.108			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 1029

Specific gravity, calculated: 0.611

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:

Page 1 of 1

Company Name: APPROACH ENV.
 Contact Name: MARK MORSE
 Address: 151 FLEESDALE BLVD. P.O. Box 7192 SUITE B
 City, State Zip: SARASOTA, FL 34107
 Phone Number: 318-401-0085 Ext:
 Fax Number: 318-222-2425
 E-mail Address: MARKMORSE@APPROACHENV.COM

Billing Information: SAME
 PO Number:
 Quote Number:
 Required QC Level

Project Name/Number: Constak Oil Leaks
 Sampler's Signature: [Signature]
 Shipping Method: UPS / FedEx / NOW
 Bill Monthly: Yes No
 DHL / Element / Hand / Mail

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/RIISC 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			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	Grab / Composite				Matrix					
DORICK 21HZ #2 AIT WELL TURBID	8/2/18	14:30		1	ONSTR	X						
DORICK 21HZ #2 AIT SURFACE CASICH	8/2/18	14:50		1	ONSTR	X						

Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
[Signature]	8/3/18	[Signature]	8-3-18 9:20am	SN# 250110
[Signature]	8/6/18	[Signature]	8-6-18 8:6am	Received at lab on ice? <input type="checkbox"/> Yes <input type="checkbox"/> 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 46580-2368 USA P 574-267-3305 F 574-269-6569

3371 Cleveland Road, Suite 100A South Bend, IN 46628-9780 USA P 574-277-0707 F 574-273-5699

2417 W. Pinhook Rd Lafayette, LA 70508-3344 USA P 337-235-0483 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: 239444-7 -6

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: DERRICK 21 HZ #2 ALT
STA # : 250110

Sample Data: **Date Collected:** 08/02/2018 02:50 PM **Date Received:** 08/06/2018 **By:** JOHN MAGGIO
PSIG: 350 **Temp:** N/P **DEG. F.**

Remarks: SURFACE CASING

CYL # 89151

Sample Type: SPOT

Analyst: GG

Hydrocarbon Analysis - GPA 2261-13

Component Name	Mol Percent	GPM @ 14.730 PSIA
Carbon Dioxide (CO2)	0.000	
Nitrogen (N2)	4.383	
Methane (C1)	91.000	
Ethane (C2)	2.524	0.676
Propane (C3)	0.975	0.269
Iso-Butane (IC4)	0.358	0.117
N-Butane (NC4)	0.349	0.110
Iso-Pentane (IC5)	0.169	0.062
N-Pentane (NC5)	0.099	0.036
Hexanes Plus (C6+)	0.143	0.062
Total	100.000	

Mol Weight: 17.75 **Ethane + GPM:** 1.332
BTU/LB: 22003.92 **Propane + GPM:** 0.656
Iso-Pentane + GPM: 0.160

Compressibility Factor: 0.9978
Specific Gravity @ 60 Deg. F. (Air = 1) : 0.614

BTU/Cuft. (Real) 60 Deg. F. - PSIA:	14.650	14.696	14.730	15.025
Dry:	1028.4	1031.6	1034.0	1054.7
Sat:	1010.8	1014.0	1016.3	1036.7

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

239444-7 -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: DERRICK 21 HZ #2 ALT

STA # : 250110

239444-7

**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)	0.0077	0.0373
2,3-DIMETHYLBUTANE CYCLOPENTANE	0.0077	0.0339
2-METHYLPENTANE	0.0330	0.1594
3-METHYLPENTANE	0.0155	0.0748
N-HEXANE	0.0264	0.1276
2,2-DIMETHYLPENTANE	0.0018	0.0102
METHYLCYCLOPENTANE	0.0027	0.0130
2,4-DIMETHYLPENTANE	0.0023	0.0129
2,2,3-TRIMETHYLBUTANE	0.0004	0.0024
BENZENE	0.0001	0.0004
3,3-DIMETHYLPENTANE	0.0007	0.0037
CYCLOHEXANE	0.0007	0.0032
2-METHYLHEXANE	0.0073	0.0411
2,3-DIMETHYLPENTANE	0.0019	0.0108
1,1-DIMETHYLCYCLOPENTANE 3-METHYLHEXANE	0.0064	0.0357

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

COMPONENT NAME	MOL %	WEIGHT %
1,t3-DIMETHYLCYCLOPENTANE	0.0006	0.0031
1,c3-DIMETHYLCYCLOPENTANE 3-ETHYLPENTANE	0.0008	0.0045
1,t2-DIMETHYLCYCLOPENTANE 2,2,4-TRIMETHYLPENTANE	0.0008	0.0045
N-HEPTANE	0.0080	0.0452
METHYLCYCLOHEXANE 1,1,3-TRIMETHYLCYCLOPENTANE 2,2-DIMETHYLHEXANE	0.0019	0.0106
1,C2-DIMETHYLCYCLOPENTANE	0.0001	0.0005
2,5-DIMETHYLHEXANE	0.0009	0.0057
2,4-DIMETHYLHEXANE 2,2,3-TRIMETHYLPENTANE ETHYLCYCLOPENTANE	0.0012	0.0071
1,t2,c4-TRIMETHYLCYCLOPENTANE 3,3-DIMETHYLHEXANE	0.0005	0.0033
1,t2,C3-TRIMETHYLCYCLOPENTANE	0.0002	0.0011
2,3,4-TRIMETHYLPENTANE	0.0001	0.0003
TOLUENE	0.0002	0.0011
2,3-DIMETHYLHEXANE	0.0004	0.0025
1,1,2-TRIMETHYLCYCLOPENTANE	0.0001	0.0005
2-METHYLHEPTANE	0.0027	0.0171
4-METHYLHEPTANE	0.0006	0.0041
3,4-DIMETHYLHEXANE	0.0002	0.0011
3-METHYLHEPTANE 3-ETHYLHEXANE	0.0022	0.0139
1,c3-DIMETHYLCYCLOHEXANE 1,c2,t3-TRIMETHYLCYCLOPENTANE 1,c2,t4-TRIMETHYLCYCLOPENTANE	0.0003	0.0019
1,t4-DIMETHYLCYCLOHEXANE	0.0001	0.0008
2,2,5-TRIMETHYLHEXANE	0.0001	0.0010
1,1-DIMETHYLCYCLOHEXANE 1,methyl-t3-ETHYLCYCLOPENTANE	0.0001	0.0003
1-methyl-C3-ETHYLCYCLOPENTANE	0.0000	0.0001
1-methyl-t2-ETHYLCYCLOPENTANE 2,2,4-TRIMETHYLHEXANE	0.0001	0.0004
1-methyl-1-ETHYLCYCLOPENTANE CYCLOHEPTANE	0.0020	0.0131
N-OCTANE		
1,T2-DIMETHYLCYCLOCHEXANE	0.0000	0.0002
UNKNOWN	0.0000	0.0003
1,t3-DIMETHYLCYCLOHEXANE 1,c4-DIMETHYLCYCLOHEXANE 1,c2,c3-TRIMETHYLCYCLOPENTANE	0.0001	0.0004
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	0.0002	0.0013
2,2-DIMETHYLHEPTANE	0.0000	0.0000
2,4-DIMETHYLHEPTANE	0.0002	0.0015
1-methyl-c2-ETHYLCYCLOPENTANE		
2,2,3-TRIMETHYLHEXANE	0.0001	0.0004
1,c2-DIMETHYLCYCLOHEXANE	0.0004	0.0024
2,6-DIMETHYLHEPTANE		
N-PROPYLCYCLOPENTANE	0.0000	0.0000
1,c3,c5-TRIMETHYLCYCLOHEXANE		
2,5-DIMETHYLHEPTANE	0.0006	0.0036
3,5-DIMETHYLHEPTANE		
ETHYLCYCLOHEXANE		
1,1,3-TRIMETHYLCYCLOHEXANE	0.0001	0.0010
2,3,3-TRIMETHYLHEXANE		
3,3-DIMETHYLHEPTANE		
1,1,4-TRIMETHYLCYCLOHEXANE	0.0000	0.0001
UNKNOWN	0.0000	0.0000
2,3,4-TRIMETHYLHEXANE	0.0000	0.0001
ETHYLBENZENE	0.0000	0.0002
1,t2,t4-TRIMETHYLCYCLOHEXANE	0.0002	0.0011
1,c3,t5-TRIMETHYLCYCLOHEXANE		
2,3-DIMETHYLHEPTANE		
M-XYLENE	0.0002	0.0014
P-XYLENE		
3,4-DIMETHYLHEPTANE		
2-METHYLOCTANE	0.0007	0.0052
4-METHYLOCTANE		
UNKNOWN	0.0000	0.0000
3-METHYLOCTANE	0.0004	0.0029
UNKNOWN	0.0000	0.0001
1,t2,c3-TRIMETHYLCYCLOHEXANE	0.0001	0.0004
1,t2,c4-TRIMETHYLCYCLOHEXANE		
O-XYLENE	0.0000	0.0003
1,1,2-TRIMETHYLCYCLOHEXANE	0.0000	0.0000
UNKNOWN	0.0000	0.0002
ISOBUTYLCYCLOPENTANE	0.0000	0.0001
N-NONANE	0.0004	0.0027
UNKNOWN	0.0000	0.0000
1,c2,c3-TRIMETHYLCYCLOHEXANE	0.0000	0.0001
1,c2,t3-TRIMETHYLCYCLOHEXANE		
UNKNOWN	0.0000	0.0000
ISOPROPYLBENZENE	0.0000	0.0001
2,2-DIMETHYLOCTANE	0.0000	0.0000
ISOPROPYLCYCLOHEXANE	0.0000	0.0000
CYCLOOCTANE		
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	0.0001
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	0.0003	0.0021
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	0.0001
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	0.0002	0.0020
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:	0.1430	0.7405

TOTAL HEXANES	0.0903	0.4330
TOTAL HEPTANES	0.0345	0.1907
TOTAL OCTANES	0.0139	0.0865
TOTAL NONANES	0.0037	0.0256
TOTAL DECANES PLUS	0.0006	0.0046

BTEX COMPONENTS

N-HEXANE	0.0264	0.1276
BENZENE	0.0001	0.0004
TOLUENE	0.0002	0.0011
ETHYLBENZENE	0.0000	0.0002
XYLENE	0.0003	0.0017

239444-7
**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)	5.388	5.032
2,3-DIMETHYLBUTANE	5.411	4.583
CYCLOPENTANE		
2-METHYLPENTANE	23.056	21.532
3-METHYLPENTANE	10.815	10.101
N-HEXANE	18.454	17.234
2,2-DIMETHYLPENTANE	1.269	1.378
METHYLCYCLOPENTANE	1.921	1.752
2,4-DIMETHYLPENTANE	1.606	1.744
2,2,3-TRIMETHYLBUTANE	0.304	0.330
BENZENE	0.070	0.059
3,3-DIMETHYLPENTANE	0.465	0.505
CYCLOHEXANE	0.473	0.431
2-METHYLHEXANE	5.108	5.547
2,3-DIMETHYLPENTANE	1.338	1.453
1,1-DIMETHYLCYCLOPENTANE	4.444	4.816
3-METHYLHEXANE		
1,t3-DIMETHYLCYCLOPENTANE	0.389	0.414
1,c3-DIMETHYLCYCLOPENTANE	0.569	0.607
3-ETHYLPENTANE		
1,t2-DIMETHYLCYCLOPENTANE	0.568	0.614
2,2,4-TRIMETHYLPENTANE		
N-HEPTANE	5.619	6.102
METHYLCYCLOHEXANE	1.326	1.432
1,1,3-TRIMETHYLCYCLOPENTANE		

CAPILLARY ANALYSIS - METHOD GPA 2286-95
HEAVY END FRACTION

COMPONENT NAME	MOL %	WEIGHT %
2,2-DIMETHYLHEXANE		
1,C2-DIMETHYLCYCLOPENTANE	0.059	0.062
2,5-DIMETHYLHEXANE	0.618	0.765
2,4-DIMETHYLHEXANE	0.858	0.958
2,2,3-TRIMETHYLPENTANE		
ETHYLCYCLOPENTANE		
1,t2,c4-TRIMETHYLCYCLOPENTANE	0.363	0.442
3,3-DIMETHYLHEXANE		
1,t2,C3-TRIMETHYLCYCLOPENTANE	0.118	0.143
2,3,4-TRIMETHYLPENTANE	0.037	0.046
TOLUENE	0.153	0.153
2,3-DIMETHYLHEXANE	0.270	0.334
1,1,2-TRIMETHYLCYCLOPENTANE	0.052	0.063
2-METHYLHEPTANE	1.870	2.315
4-METHYLHEPTANE	0.443	0.549
3,4-DIMETHYLHEXANE	0.125	0.155
3-METHYLHEPTANE	1.512	1.872
3-ETHYLHEXANE		
1,c3-DIMETHYLCYCLOHEXANE	0.210	0.255
1,c2,t3-TRIMETHYLCYCLOPENTANE		
1,c2,t4-TRIMETHYLCYCLOPENTANE		
1,t4-DIMETHYLCYCLOHEXANE	0.084	0.103
2,2,5-TRIMETHYLHEXANE	0.096	0.133
1,1-DIMETHYLCYCLOHEXANE	0.036	0.044
1,methyl-t3-ETHYLCYCLOPENTANE		
1-methyl-C3-ETHYLCYCLOPENTANE	0.012	0.015
1-methyl-t2-ETHYLCYCLOPENTANE	0.039	0.050
2,2,4-TRIMETHYLHEXANE		
1-methyl-1-ETHYLCYCLOPENTANE	1.424	1.763
CYCLOHEPTANE		
N-OCTANE		
1,T2-DIMETHYLCYCLOCHEXANE	0.025	0.030
UNKNOWN	0.032	0.044
1,t3-DIMETHYLCYCLOHEXANE	0.042	0.051
1,c4-DIMETHYLCYCLOHEXANE		
1,c2,c3-TRIMETHYLCYCLOPENTANE		
2,4,4-TRIMETHYLHEXANE	0.001	0.002
ISOPROPYLCYCLOPENTANE	0.000	0.000
UNKNOWN	0.123	0.171
2,2-DIMETHYLHEPTANE	0.000	0.000
2,4-DIMETHYLHEPTANE	0.153	0.199
1-methyl-c2-ETHYLCYCLOPENTANE		
2,2,3-TRIMETHYLHEXANE	0.039	0.054

CAPILLARY ANALYSIS - METHOD GPA 2286-95
HEAVY END FRACTION

COMPONENT NAME	MOL %	WEIGHT %
1,c2-DIMETHYLCYCLOHEXANE	0.257	0.321
2,6-DIMETHYLHEPTANE		
N-PROPYLCYCLOPENTANE	0.000	0.000
1,c3,c5-TRIMETHYLCYCLOHEXANE		
2,5-DIMETHYLHEPTANE	0.389	0.480
3,5-DIMETHYLHEPTANE		
ETHYLCYCLOHEXANE		
1,1,3-TRIMETHYLCYCLOHEXANE	0.093	0.129
2,3,3-TRIMETHYLHEXANE		
3,3-DIMETHYLHEPTANE		
1,1,4-TRIMETHYLCYCLOHEXANE	0.010	0.013
UNKNOWN	0.000	0.000
2,3,4-TRIMETHYLHEXANE	0.012	0.016
ETHYLBENZENE	0.025	0.028
1,t2,t4-TRIMETHYLCYCLOHEXANE	0.113	0.154
1,c3,t5-TRIMETHYLCYCLOHEXANE		
2,3-DIMETHYLHEPTANE		
M-XYLENE	0.160	0.185
P-XYLENE		
3,4-DIMETHYLHEPTANE		
2-METHYLOCTANE	0.504	0.701
4-METHYLOCTANE		
UNKNOWN	0.000	0.000
3-METHYLOCTANE	0.285	0.397
UNKNOWN	0.012	0.018
1,t2,c3-TRIMETHYLCYCLOHEXANE	0.035	0.048
1,t2,c4-TRIMETHYLCYCLOHEXANE		
O-XYLENE	0.034	0.039
1,1,2-TRIMETHYLCYCLOHEXANE	0.000	0.000
UNKNOWN	0.016	0.025
ISOBUTYLCYCLOPENTANE	0.013	0.018
N-NONANE	0.262	0.365
UNKNOWN	0.000	0.000
1,c2,c3-TRIMETHYLCYCLOHEXANE	0.014	0.019
1,c2,t3-TRIMETHYLCYCLOHEXANE		
UNKNOWN	0.000	0.000
ISOPROPYLBENZENE	0.008	0.010
2,2-DIMETHYLOCTANE	0.000	0.000
ISOPROPYLCYCLOHEXANE	0.000	0.000
CYCLOOCTANE		
UNKNOWN	0.000	0.000
N-BUTYLCYCLOPENTANE	0.000	0.000
N-PROPYLCYCLOHEXANE		
3,3-DIMETHYLOCTANE	0.006	0.009

CAPILLARY ANALYSIS - METHOD GPA 2286-95
HEAVY END FRACTION

COMPONENT NAME	MOL %	WEIGHT %
UNKNOWN	0.000	0.000
N-PROPYLBENZENE	0.000	0.000
UNKNOWN	0.000	0.000
M-ETHYLTOLUENE	0.000	0.000
P-ETHYLTOLUENE	0.000	0.000
2,3-DIMETHYLOCTANE		
4-METHYLNONANE	0.000	0.000
5-METHYLNONANE		
1,3,5-TRIMETHYLBENZENE		
2-METHYLNONANE	0.000	0.000
3-ETHYLOCTANE	0.000	0.000
O-ETHYLTOLUENE	0.000	0.000
3-METHYLNONANE		
UNKNOWN	0.000	0.000
1,2,4-TRIMETHYLBENZENE	0.000	0.000
t-BUTYLBENZENE		
METHYLCYCLOOCTANE		
tert-BUTYLCYCLOHEXANE	0.000	0.000
ISO-BUTYLCYCLOHEXANE	0.000	0.000
N-DECANE	0.184	0.283
ISOBUTYLBENZENE	0.000	0.000
sec-BUTYLBENZENE	0.004	0.006
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	0.014	0.020
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	0.161	0.273
UNKNOWN	0.000	0.000
1,2,4,5-TETRAMETHYLBENZENE	0.000	0.000
1,2,3,5-TETRAMETHYLBENZENE	0.000	0.000
UNKNOWN	0.000	0.000
1,2,3,4-TETRAMETHYLBENZENE	0.000	0.000
CYCLODECANE	0.000	0.000
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)	3.1732
Molecular Weight	92.27
Compressibility Factor	0.8849
Summation Factor	0.0885
Cu. Ft. Vapor/Gal @ 14.696 & 60 Deg. F.	23.673
Cu. Ft. Vapor/Gal @ 14.730 & 60 Deg. F.	23.618
Cu. Ft. Vapor/Gal @ 14.650 & 60 Deg. F.	23.747
Btu/cu. Ft. @ 14.696 PSIA, Dry	5055.00
Btu/cu. Ft. @ 14.730 PSIA, Dry	5066.70
BTU/LB	20797



Gas Analysis Report No: 239444-8 -6

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: DERRICK 21 HZ #2 ALT
 STA # : 250110

Sample Data: Date Collected: 08/02/2018 02:30 PM Date Received: 08/06/2018 By: JOHN MAGGIO
 PSIG: 1000 Temp: N/P DEG. F.

Remarks: WELL TUBING

CYL # 10335

Sample Type: SPOT

Analyst: GG

Hydrocarbon Analysis - GPA 2261-13

Component Name	Mol Percent	GPM @ 14.730 PSIA
Carbon Dioxide (CO2)	2.144	
Nitrogen (N2)	0.038	
Methane (C1)	97.359	
Ethane (C2)	0.427	0.114
Propane (C3)	0.024	0.007
Iso-Butane (IC4)	0.004	0.001
N-Butane (NC4)	0.004	0.001
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: 16.72 Ethane + GPM: 0.123
 BTU/LB: 22512.97 Propane + GPM: 0.009
 Iso-Pentane + GPM: 0.000

Compressibility Factor: 0.9979
 Specific Gravity @ 60 Deg. F. (Air = 1) : 0.578

BTU/Cuft. (Real) 60 Deg. F. - PSIA:	14.650	14.696	14.730	15.025
Dry:	990.7	993.8	996.1	1016.1
Sat:	973.7	976.8	979.1	998.7

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

239444-8 -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: DERRICK 21 HZ #2 ALT

STA # : 250110

239444-8

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