EXTENDED GAS ANALYSIS

V0011098 - 5			52134-2010-3383
CONTAINER IDENTITY	METER ID	WELL LICENSE NUMBER	LABORATORY FILE NUMBER
Surge Energy Inc.			3
OPERATOR			PAGE
100/01-04-002-26W1/00	Surge Waskada 1-4-2-26	KB ELEV (m)	GR ELEV (m)
LOCATION (UWI)	WELL NAME		
Waskada		Core Lab - Estevan	
FIELD OR AREA	POOL OR ZONE	SAMPLER	
TEST TYPE AND NO.	TEST RECOVERY		
Wellhead Casing			
POINT OF SAMPLE		SAMPLE POINT ID	

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

TEST INTERVAL or PERFS (meters)

Pressures, kPa (gauge)

SEPARATOR	RESERVOIR	OTHER	CONTAINER WHEN SAMPLED	CONTAINER WHEN RECEIVED
			385 @ 14 °C	380 @ 22 °C

Temperatures, °C

SEPARATOR	OTHER

12:00 Hrs					
2010 09 21	2010 09 23	2010 09 27	TUN		@ °C
DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYZED (Y/M/D)	ANALYST	AMT. AND TYPE CUSHION	MUD RESISTIVITY

COMPONENT	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	mL/m³ AIR FREE AS RECEIVED
H_2	0.0010	0.0011	
He	0.0001	0.0001	
N_2	0.0715	0.0768	
CO_2	0.0686	0.0000	
H_2S	0.0000	0.0000	
C_1	0.6596	0.7080	
C_2	0.1958	0.2102	695.8
C_3	0.0001	0.0001	0.4
iC_4	Trace	Trace	Trace
C_4	Trace	Trace	Trace
iC_5	Trace	Trace	Trace
C_5	Trace	Trace	Trace
C_6	Trace	Trace	Trace
C_{7+}	0.0033	0.0037	17.0
Total	1.0000	1.0000	713.2

CALCULATED GROSS HEATING VALUE MJ/m³ @ 15°C & 101.325 kPa (abs.)

MOISTURE FREE	MOISTURE & ACID GAS FREE
38.56	41.41

CALCULATED VAPOR PRESSURE kPa (abs.) @ 40 °C

PENTANES PLUS
6.7

CALCULATED TOTAL SAMPLE PROPERTIES (AIR=1) @ 15°C & 101.325 kPa
MOISTURE FREE AS SAMPLED

DENSITY	RELATIVE DENSITY	RELATIVE MOLECULAR MASS
0.923 kg/m³	0.754	21.8

CALCULATED PSEUDOCRITICAL PROPERTIES

AS SAMPLED pPc	AS SAMPLED pTc	ACID GAS FREE pPc	ACID GAS FREE pTc
4750.2 kPa (abs)	217.4 K	4556.3 kPa (abs)	211.0 K

C_{7+} PROPERTIES @ 15°C & 101.325 kPa DENSITY	MOLECULAR WEIGHT	MOLE FRACTION HYDROGEN SULPHIDE	LOCATION	METHOD
829.8 kg/m³	99.4	0.0000000	Field	Gastec

REMARKS:

H2S was not detected in the field by Gastec.

Client field conditions were not available.

NOTE: THE GROSS HEATING VALUE HAS BEEN CALCULATED IN ACCORDANCE TO AGA REPORT #5 AND ALL PROPERTIES HAVE BEEN CALCULATED UTILIZING PHYSICAL CONSTANTS AND BOILING POINT GROUPING.

EXTENDED GAS ANALYSIS

V0000551 - 1			52134-2010-3383
CONTAINER IDENTITY	METER ID	WELL LICENSE NUMBER	LABORATORY FILE NUMBER
Surge Energy Inc.			4
OPERATOR			PAGE
100/03-04-002-26W1/00	Surge Waskada 3-4-2-26	KB ELEV (m)	GR ELEV (m)
LOCATION (UWI)	WELL NAME		
Waskada		Core Lab - Estevan	
FIELD OR AREA	POOL OR ZONE	SAMPLER	
TEST TYPE AND NO.	TEST RECOVERY		
Wellhead Casing			
POINT OF SAMPLE	SAMPLE POINT ID		

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

TEST INTERVAL or PERFS (meters)

Pressures, kPa (gauge)					Temperatures, °C	
SEPARATOR	RESERVOIR	OTHER	35 @ 13 °C CONTAINER WHEN SAMPLED	40 @ 22 °C CONTAINER WHEN RECEIVED	SEPARATOR	OTHER

10:55 Hrs

2010 09 21	2010 09 23	2010 09 24	TUN		@ °C
DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYZED (Y/M/D)	ANALYST	AMT. AND TYPE CUSHION	MUD RESISTIVITY

COMPONENT	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	mL/m³ AIR FREE AS RECEIVED
H_2	Trace	0.0001	
He	0.0001	0.0001	
N_2	0.0372	0.0393	
CO_2	0.0539	0.0000	
H_2S	0.0018	0.0000	
C_1	0.2666	0.2823	
C_2	0.1696	0.1796	602.7
C_3	0.2402	0.2543	882.7
iC_4	0.0442	0.0469	193.0
C_4	0.1135	0.1202	477.5
iC_5	0.0257	0.0272	125.5
C_5	0.0251	0.0265	121.4
C_6	0.0108	0.0114	56.4
C_{7+}	0.0113	0.0121	58.6
Total	1.0000	1.0000	2,517.8

CALCULATED GROSS HEATING VALUE MJ/m³ @ 15°C & 101.325 kPa (abs.)

75.28	79.69	CALCULATED VAPOR PRESSURE kPa (abs.) @ 40 °C: 101.4
MOISTURE FREE	MOISTURE & ACID GAS FREE	PENTANES PLUS

CALCULATED TOTAL SAMPLE PROPERTIES (AIR=1) @ 15°C & 101.325 kPa
MOISTURE FREE AS SAMPLED

1.619 kg/m³	1.322	38.3
DENSITY	RELATIVE DENSITY	RELATIVE MOLECULAR MASS

CALCULATED PSEUDOCRITICAL PROPERTIES

AS SAMPLED		ACID GAS FREE	
4452.4 kPa (abs)	315.1 K	4276.5 kPa (abs)	315.6 K
pPc	pTc	pPc	pTc

C_{7+} PROPERTIES @ 15°C & 101.325 kPa		MOLE FRACTION	LOCATION	METHOD
809.0 kg/m³	97.7	0.0018000	Field	Gastec
DENSITY	MOLECULAR WEIGHT	HYDROGEN SULPHIDE		

REMARKS:

H2S determined in the field by Gastec = 1800 ppm

NOTE: THE GROSS HEATING VALUE HAS BEEN CALCULATED IN ACCORDANCE TO AGA REPORT #5 AND ALL PROPERTIES HAVE BEEN CALCULATED UTILIZING PHYSICAL CONSTANTS AND BOILING POINT GROUPING.

OIL ANALYSIS

Field	Value
CONTAINER IDENTITY	210 - 2
METER ID	
WELL LICENSE NUMBER	
LABORATORY FILE NUMBER	52134-2010-3383
OPERATOR	Surge Energy Inc.
PAGE	5
LOCATION (UWI)	100/03-04-002-26W1/00
WELL NAME	Surge Waskada 3-4-2-26
KB ELEV (m)	
GR ELEV (m)	
FIELD OR AREA	Waskada
POOL OR ZONE	
SAMPLER	Core Lab - Estevan
TEST TYPE AND NO.	
TEST RECOVERY	
POINT OF SAMPLE	Wellhead Tubing
SAMPLE POINT ID	

TEST INTERVAL or PERFS (meters)

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

Pressures, kPa (gauge): SEPARATOR | RESERVOIR | OTHER | CONTAINER WHEN SAMPLED @ °C | CONTAINER WHEN RECEIVED @ °C

Temperatures, °C: SEPARATOR | OTHER

DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYZED (Y/M/D)	ANALYST	AMT. AND TYPE CUSHION	MUD RESISTIVITY
11:10 Hrs 2010 09 21	2010 09 23	2010 09 23	LX		@ °C

SAMPLE PROPERTIES

APPEARANCE OF CLEAN OIL	WATER	BS	TOTAL BS & W
Dark Brown	0.011	0.001	0.012

ABSOLUTE DENSITY
kg/m³ @15°C

AS RECEIVED:

AFTER CLEANING: 856.3

API GRAVITY @15.6°C

AS RECEIVED:

AFTER CLEANING: 33.7

SULPHUR
9.71 grams/kg

SALT
kg/m³

POUR POINT °C
-3 A.S.T.M.

REID VAPOUR PRESSURE
kPa

CARBON RESIDUE
CONRADSON:

RAMSBOTTOM:

VISCOSITY

TEMP °C	DYNAMIC mPa's	KINEMATIC mm²/s
20	13.99	16.40
30	8.998	10.64
40	6.313	7.531

FRACTION DISTILLED	TEMP °C
FBP	
CRACKED	

METHOD:

BAROM PRESS: kPa

ROOM TEMP: °C

INITIAL BOIL PT: °C

DISTILLATION SUMMARY

204 °C NAPHTHA | 274 °C KEROSENE

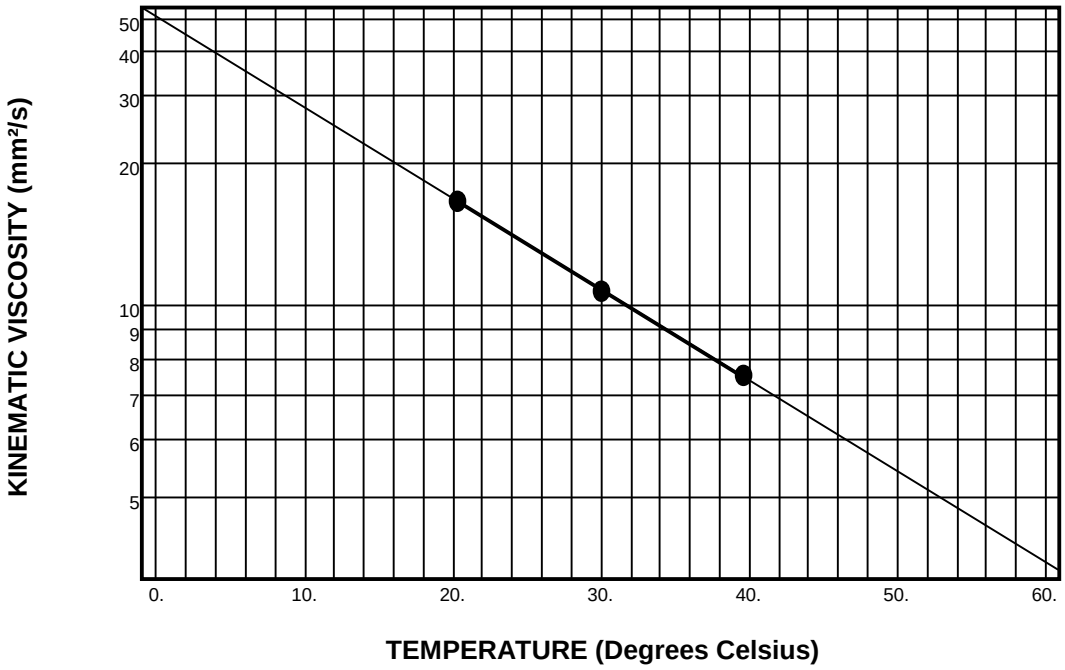
343 °C LIGHT GAS/OIL | RECOVERED

RESIDUE | DISTILLATION LOSS

REMARKS: Free water (volume %) = 60.0

Company Name: Surge Energy Inc.
Well Name: Surge Waskada 3-4-2-26
Location: 100/03-04-002-26W1/00
Sampled From: Wellhead Tubing
Sampling Date: 2010 09 21

VISCOSITY - TEMPERATURE CHART



EXTENDED GAS ANALYSIS

V0002219 - 3			52134-2010-3383
CONTAINER IDENTITY	METER ID	WELL LICENSE NUMBER	LABORATORY FILE NUMBER
Surge Energy Inc.			1
OPERATOR			PAGE
100/04-03-002-26W1/00	Surge Waskada 4-3-2-26	KB ELEV (m)	GR ELEV (m)
LOCATION (UWI)	WELL NAME		
Waskada		Core Lab - Estevan	
FIELD OR AREA	POOL OR ZONE	SAMPLER	

TEST TYPE AND NO. | TEST RECOVERY

Wellhead Casing

POINT OF SAMPLE | SAMPLE POINT ID

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

TEST INTERVAL or PERFS (meters)

Pressures, kPa (gauge)					Temperatures, °C	
SEPARATOR	RESERVOIR	OTHER	23 @ 14 °C CONTAINER WHEN SAMPLED	35 @ 22 °C CONTAINER WHEN RECEIVED	SEPARATOR	OTHER

11:30 Hrs

2010 09 21	2010 09 23	2010 09 27	TUN		@ °C
DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYZED (Y/M/D)	ANALYST	AMT. AND TYPE CUSHION	MUD RESISTIVITY

COMPONENT	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	mL/m³ AIR FREE AS RECEIVED
H_2	0.0001	0.0001	
He	0.0001	0.0001	
N_2	0.0291	0.0293	
CO_2	0.0070	0.0000	
H_2S	0.0000	0.0000	
C_1	0.2890	0.2910	
C_2	0.1982	0.1996	704.3
C_3	0.2868	0.2888	1,053.9
iC_4	0.0441	0.0444	192.6
C_4	0.1069	0.1077	449.8
iC_5	0.0141	0.0142	68.8
C_5	0.0109	0.0110	52.7
C_6	0.0022	0.0022	11.3
C_{7+}	0.0115	0.0116	59.5
Total	1.0000	1.0000	2,592.9

CALCULATED GROSS HEATING VALUE MJ/m³ @ 15°C & 101.325 kPa (abs.)		CALCULATED VAPOR PRESSURE kPa (abs.) @ 40 °C
76.23	76.77	92.5
MOISTURE FREE	MOISTURE & ACID GAS FREE	PENTANES PLUS

CALCULATED TOTAL SAMPLE PROPERTIES (AIR=1) @ 15°C & 101.325 kPa
MOISTURE FREE AS SAMPLED

1.534 kg/m³	1.252	36.3
DENSITY	RELATIVE DENSITY	RELATIVE MOLECULAR MASS

CALCULATED PSEUDOCRITICAL PROPERTIES

AS SAMPLED		ACID GAS FREE	
4364.0 kPa (abs)	310.4 K	4342.8 kPa (abs)	310.4 K
pPc	pTc	pPc	pTc

C_{7+} PROPERTIES @ 15°C & 101.325 kPa		MOLE FRACTION	LOCATION	METHOD
825.8 kg/m³	99.2	0.0000000	Field	Gastec
DENSITY	MOLECULAR WEIGHT	HYDROGEN SULPHIDE		

REMARKS:

H2S was not detected in the field by Gastec.

NOTE: THE GROSS HEATING VALUE HAS BEEN CALCULATED IN ACCORDANCE TO AGA REPORT #5 AND ALL PROPERTIES HAVE BEEN CALCULATED UTILIZING PHYSICAL CONSTANTS AND BOILING POINT GROUPING.

OIL ANALYSIS

CONTAINER IDENTITY	METER ID	WELL LICENSE NUMBER	LABORATORY FILE NUMBER
001 - 1			52134-2010-3073

OPERATOR	PAGE
Surge Energy Inc.	1

LOCATION (UWI)	WELL NAME	KB ELEV (m)	GR ELEV (m)
100/05-03-002-26W1/00	Surge Waskada 5-3-2-26		

FIELD OR AREA	POOL OR ZONE	SAMPLER
Waskada		Surge Energy

TEST TYPE AND NO.	TEST RECOVERY

POINT OF SAMPLE	SAMPLE POINT ID
Not Provided	

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

TEST INTERVAL or PERFS (meters)

Pressures, kPa (gauge)

SEPARATOR	RESERVOIR	OTHER	CONTAINER WHEN SAMPLED @ °C	CONTAINER WHEN RECEIVED @ °C

Temperatures, °C

SEPARATOR	OTHER

DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYZED (Y/M/D)	ANALYST	AMT. AND TYPE CUSHION	MUD RESISTIVITY @ °C
2010 08 17	2010 08 23	2010 08 27	L/R/Y		

SAMPLE PROPERTIES

APPEARANCE OF CLEAN OIL	WATER	BS	TOTAL BS & W
Dark Brown	0.272	0.008	0.280

ABSOLUTE DENSITY
kg/m³ @15°C

AS RECEIVED	AFTER CLEANING
	876.4

API GRAVITY @15.6°C

AS RECEIVED	AFTER CLEANING
	29.9

SULPHUR
8.86 grams/kg

SALT
kg/m³

POUR POINT °C
0 A.S.T.M.

REID VAPOUR PRESSURE
kPa

CARBON RESIDUE

CONRADSON	RAMSBOTTOM

VISCOSITY

TEMP °C	DYNAMIC mPa's	KINEMATIC mm²/s
20	43.45	49.78
30	19.59	22.63
40	12.10	14.09

FRACTION DISTILLED	TEMP °C
FBP	
CRACKED	

METHOD | BAROM PRESS kPa

ROOM TEMP °C | INITIAL BOIL PT °C

DISTILLATION SUMMARY

204 °C NAPHTHA	274 °C KEROSENE

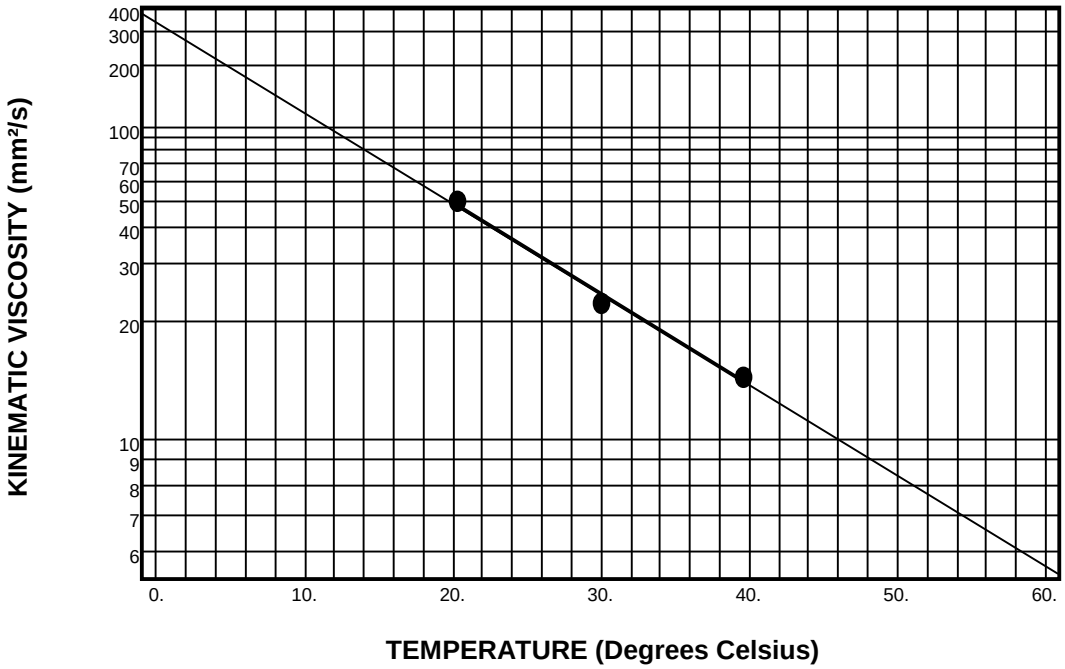
343 °C LIGHT GAS/OIL	RECOVERED

RESIDUE	DISTILLATION LOSS

REMARKS: Sample date is estimated. Free water (volume %) = 5.26

Company Name: Surge Energy Inc.
Well Name: Surge Waskada 5-3-2-26
Location: 100/05-03-002-26W1/00
Sampled From: Not Provided
Sampling Date: 2010 08 17

VISCOSITY - TEMPERATURE CHART



EXTENDED GAS ANALYSIS

V0011092 - 4			52134-2010-3383
CONTAINER IDENTITY	METER ID	WELL LICENSE NUMBER	LABORATORY FILE NUMBER
Surge Energy Inc.			2
OPERATOR			PAGE
100/12-03-002-26W1/00	Surge Waskada 12-3-2-26	KB ELEV (m)	GR ELEV (m)
LOCATION (UWI)	WELL NAME		
Waskada		Core Lab - Estevan	
FIELD OR AREA	POOL OR ZONE	SAMPLER	
TEST TYPE AND NO.	TEST RECOVERY		
Wellhead Casing			
POINT OF SAMPLE	SAMPLE POINT ID		

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

TEST INTERVAL or PERFS (meters)

Pressures, kPa (gauge)					Temperatures, °C	
SEPARATOR	RESERVOIR	OTHER	36 @ 13 °C CONTAINER WHEN SAMPLED	30 @ 22 °C CONTAINER WHEN RECEIVED	SEPARATOR	OTHER

11:45 Hrs

DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYZED (Y/M/D)	ANALYST	AMT. AND TYPE CUSHION	MUD RESISTIVITY
2010 09 21	2010 09 23	2010 09 27	TUN		@ °C

COMPONENT	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	mL/m³ AIR FREE AS RECEIVED
H_2	0.0004	0.0004	
He	0.0001	0.0001	
N_2	0.0373	0.0380	
CO_2	0.0153	0.0000	
H_2S	0.0022	0.0000	
C_1	0.3074	0.3128	
C_2	0.1872	0.1905	665.3
C_3	0.2516	0.2561	924.6
iC_4	0.0416	0.0423	181.6
C_4	0.0991	0.1009	416.9
iC_5	0.0194	0.0198	94.7
C_5	0.0191	0.0195	92.4
C_6	0.0076	0.0077	39.6
C_{7+}	0.0117	0.0119	61.5
Total	1.0000	1.0000	2,476.6

CALCULATED GROSS HEATING VALUE MJ/m³ @ 15°C & 101.325 kPa (abs.)		CALCULATED VAPOR PRESSURE kPa (abs.) @ 40 °C
74.68	75.96	96.6
MOISTURE FREE	MOISTURE & ACID GAS FREE	PENTANES PLUS

CALCULATED TOTAL SAMPLE PROPERTIES (AIR=1) @ 15°C & 101.325 kPa
MOISTURE FREE AS SAMPLED

DENSITY	RELATIVE DENSITY	RELATIVE MOLECULAR MASS
1.531 kg/m³	1.250	36.2

CALCULATED PSEUDOCRITICAL PROPERTIES

AS SAMPLED		ACID GAS FREE	
4379.3 kPa (abs)	306.7 K	4322.2 kPa (abs)	306.6 K
pPc	pTc	pPc	pTc

C_{7+} PROPERTIES @ 15°C & 101.325 kPa		MOLE FRACTION	LOCATION	METHOD
818.1 kg/m³	99.9	0.0021500	Field	Gastec
DENSITY	MOLECULAR WEIGHT	HYDROGEN SULPHIDE		

REMARKS:

H2S determined in the field by Gastec = 2150 ppm

Client field conditions were not available.

NOTE: THE GROSS HEATING VALUE HAS BEEN CALCULATED IN ACCORDANCE TO AGA REPORT #5 AND ALL PROPERTIES HAVE BEEN CALCULATED UTILIZING PHYSICAL CONSTANTS AND BOILING POINT GROUPING.