



C30+ COMPOSITIONAL ANALYSIS

BOW RIVER NORTH

B3A9014:IE1307

MaxID

Client ID

Meter Number

Laboratory Number

CRUDE QUALITY INC.

Operator Name

LSD

Well ID

CRUDE QUALITY INC. MINI ASSAY

MAXXAM ANALYTICS

Well Name

Initials of Sampler

Sampling Company

BRN NAPHTHA IBP - 190°C

4L CAN

Field or Area

Pool or Zone

Sample Point

Container Identity

Percent Full

Test Recovery

Interval

Elevations (m)

Sample Gathering Point

Solution Gas

Test Type

No.

Multiple Recovery

From:

To:

KB

GRD

Well Fluid Status

Well Status Mode

Production Rates

Gauge Pressures kPa

Temperature °C

Well Status Type

Well Type

Water m3/d

Oil m3/d

Gas 1000m3/d

Source

As Received

Source

23

As Received

Gas or Condensate Project

Licence No.

2013/11/25

2014/01/24

2014/01/24

GS1

Date Sampled Start

Date Sampled End

Date Received

Date Reported

Date Reissued

Analyst

COMPOSITION

COMPONENT	MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
N2			
CO2			
H2S			
C1	0.0000	0.0000	0.0000
C2	Trace	Trace	Trace
C3	0.0079	0.0038	0.0052
IC4	0.0242	0.0154	0.0189
NC4	0.0771	0.0491	0.0579
IC5	0.1263	0.0999	0.1101
NC5	0.1462	0.1156	0.1262
C6	0.1675	0.1582	0.1626
C7+	0.4508	0.5580	0.5191
TOTAL	1.0000	1.0000	1.0000

PROPERTIES

RESIDUE	RELATIVE DENSITY @ 15 °C		RELATIVE MOLECULAR MASS		DATA SUMMARY		
	OBSERVED	CALCULATED	OBSERVED	CALCULATED	MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
C5+		0.699		95	0.8908	0.9317	0.9180
C6+		0.723		106	0.6183	0.7162	0.6817
C7+	0.740		131	113	0.4508	0.5580	0.5191
C10+					0.0854	0.1403	0.1256
C12+					0.0089	0.0172	0.0146
TOTAL		0.688		91			

Calculated Absolute Density Total Sample: 687.4 kg/m3 @ 15°C
 Gas Equivalent Factor: 164.45 m3 Gas/m3 Liquid

** Information not supplied by client -- data derived from LSD information

Results relate only to items tested

Remarks:



C30+ COMPOSITIONAL ANALYSIS

CRUDE QUALITY INC.

B3A9014:IE1307

Operator Name

Laboratory Number

CRUDE QUALITY INC. MINI ASSAY

BRN NAPHTHA IBP - 190°C

Well Name

Sample Point

MAXXAM ANALYTICS

BOW RIVER NORTH

Sampling Company

MaxxID

Client ID

Date Sampled Start

Date Sampled End

2013/11/25

2014/01/24

2014/01/24

GS1

Date Received

Date Reported

Date Reissued

Analyst

COMPONENT	BOILING POINT (°C)	MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
Nitrogen	-196			
Carbon Dioxide	-79			
Hydrogen Sulphide	-60			
Methane	-162	0.0000	0.0000	0.0000
Ethane	-89	Trace	Trace	Trace
Propane	-42	0.0079	0.0038	0.0052
Iso-Butane	-12	0.0242	0.0154	0.0189
n-Butane	0	0.0771	0.0491	0.0579
Iso-Pentane	28	0.1263	0.0999	0.1101
n-Pentane	36	0.1462	0.1156	0.1262
Hexanes	37-69	0.1675	0.1582	0.1626
Heptanes	70-98	0.1607	0.1652	0.1590
Octanes	99-126	0.1347	0.1587	0.1487
Nonanes	127-151	0.0700	0.0938	0.0858
Decanes	152-174	0.0463	0.0713	0.0661
Undecanes	175-196	0.0302	0.0518	0.0449
Dodecanes	197-216	0.0086	0.0160	0.0136
Triadecanes	217-236	0.0002	0.0003	0.0003
Tetradecanes	237-253	Trace	Trace	Trace
Pentadecanes	254-271	Trace	Trace	Trace
Hexadecanes	272-287	Trace	Trace	Trace
Heptadecanes	288-302	Trace	Trace	Trace
Octadecanes	303-317	Trace	Trace	Trace
NonaDecanes	318-331	Trace	Trace	Trace
Eicosanes	332-343	Trace	Trace	Trace
Heneicosanes	344-357	Trace	Trace	Trace
Docosanes	358-369	Trace	Trace	Trace
Triacosanes	370-380	Trace	Trace	Trace
Tetracosanes	381-391	Trace	Trace	Trace
Pentacosanes	392-402	Trace	Trace	Trace
Hexacosanes	403-412	Trace	0.0002	0.0001
Heptacosanes	413-422	Trace	0.0002	0.0001
Octacosanes	423-432	Trace	0.0001	0.0001
Nonacosanes	433-441	Trace	0.0001	0.0001
triacontanes+	442-449+	0.0001	0.0003	0.0003
Totals		1.0000	1.0000	1.0000
neoHexane	50	0.0000	0.0000	0.0000
Methylcyclopentane	70	0.0303	0.0279	0.0255
Benzene	80	0.0073	0.0062	0.0048
Cyclohexane	81	0.0235	0.0217	0.0191
Methylcyclohexane	101	0.0371	0.0400	0.0356
Toluene	111	0.0143	0.0144	0.0114
Ethylbenzene	136	0.0043	0.0050	0.0039
m&p-Xylene	139	0.0116	0.0135	0.0106
o-Xylene	144	0.0032	0.0037	0.0029
1,2,4-Trimethylbenzene	169	0.0044	0.0060	0.0047

** Information not supplied by client -- data derived from LSD information

Results relate only to items tested

Remarks: