C30+ COMPOSITIONAL ANALYSIS

MaxxID	Client ID	Meter Number	Laboratory Number
	BOW RIVER SOUTH		B357255:GV6577

Operator Name	LSD	Well ID
CRUDE QUALITY INC.		

Well Name	Initials of Sampler	Sampling Company
CRUDE QUALITY INC. MINI ASSAY		MAXXAM ANALYTICS

Field or Area	Pool or Zone	Sample Point	Container Identity	Percent Full
		BRS NAPHTHA IBP - 190°C	4L CAN	

Test Recovery	Sample Gathering Point	Solution Gas

Test Type	No.	Multiple Recovery	Interval From:	Interval To:	Elevations (m) KB	Elevations (m) GRD	Well Fluid Status	Well Status Mode

Production Rates Water m3/d	Production Rates Oil m3/d	Production Rates Gas 1000m3/d	Gauge Pressures kPa Source	Gauge Pressures kPa As Received	Temperature °C Source	Temperature °C As Received	Well Status Type	Well Type
						23		

Gas or Condensate Project	Licence No.

Date Sampled Start	Date Sampled End	Date Received	Date Reported	Date Reissued	Analyst
		2013/07/09	2013/08/22		FA1

COMPOSITION

COMPONENT	MOLE FRACTION	MASS FRACTION	VOLUME FRACTION
N2			
CO2			
H2S			
C1	0.0000	0.0000	0.0000
C2	Trace	Trace	Trace
C3	0.0057	0.0025	0.0035
IC4	0.0084	0.0048	0.0060
NC4	0.0356	0.0203	0.0245
IC5	0.1028	0.0728	0.0822
NC5	0.1025	0.0725	0.0810
C6	0.1343	0.1135	0.1196
C7+	0.6107	0.7136	0.6832
TOTAL	1.0000	1.0000	1.0000

PROPERTIES

RESIDUE	RELATIVE DENSITY @ 15 °C OBSERVED	RELATIVE DENSITY @ 15 °C CALCULATED	RELATIVE MOLECULAR MASS OBSERVED	RELATIVE MOLECULAR MASS CALCULATED	DATA SUMMARY MOLE FRACTION	DATA SUMMARY MASS FRACTION	DATA SUMMARY VOLUME FRACTION
C5+		0.710		104	0.9503	0.9724	0.9660
C6+		0.727		113	0.7450	0.8271	0.8028
C7+	0.737		119	119	0.6107	0.7136	0.6832
C10+					0.1678	0.2423	0.2254
C12+					0.0046	0.0081	0.0071
TOTAL		0.705		102			

Calculated Absolute Density Total Sample: 704.4 kg/m3 @ 15°C
Gas Equivalent Factor: 163.49 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. (Operator Name) | B357255:GV6577 (Laboratory Number)

CRUDE QUALITY INC. MINI ASSAY (Well Name) | BRS NAPHTHA IBP - 190°C (Sample Point)

MAXXAM ANALYTICS (Sampling Company) | (MaxxID) | BOW RIVER SOUTH (Client ID)

Date Sampled Start	Date Sampled End	Date Received	Date Reported	Date Reissued	Analyst
		2013/07/09	2013/08/22		FA1

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	0.0057	0.0025	0.0035
Iso-Butane	-12	0.0084	0.0048	0.0060
n-Butane	0	0.0356	0.0203	0.0245
Iso-Pentane	28	0.1028	0.0728	0.0822
n-Pentane	36	0.1025	0.0725	0.0810
Hexanes	37-69	0.1343	0.1135	0.1196
Heptanes	70-98	0.1600	0.1487	0.1475
Octanes	99-126	0.1538	0.1655	0.1612
Nonanes	127-151	0.1291	0.1571	0.1491
Decanes	152-174	0.1090	0.1513	0.1448
Undecanes	175-196	0.0542	0.0829	0.0735
Dodecanes	197-216	0.0042	0.0070	0.0061
Triadecanes	217-236	0.0003	0.0006	0.0006
Tetradecanes	237-253	Trace	Trace	Trace
Pentadecanes	254-271	Trace	Trace	Trace
Hexadecanes	272-287	Trace	0.0001	0.0001
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	Trace	Trace
Heptacosanes	413-422	Trace	Trace	Trace
Octacosanes	423-432	Trace	Trace	Trace
Nonacosanes	433-441	Trace	Trace	Trace
Triacontanes+	442-449+	0.0001	0.0004	0.0003
Totals		1.0000	1.0000	1.0000
neoHexane	50	0.0000	0.0000	0.0000
Methylcyclopentane	70	0.0269	0.0222	0.0207
Benzene	80	0.0046	0.0035	0.0028
Cyclohexane	81	0.0205	0.0169	0.0152
Methylcyclohexane	101	0.0338	0.0325	0.0297
Toluene	111	0.0070	0.0064	0.0051
Ethylbenzene	136	0.0066	0.0069	0.0056
m&p-Xylene	139	0.0126	0.0132	0.0106
o-Xylene	144	0.0057	0.0059	0.0047
1,2,4-Trimethylbenzene	169	0.0049	0.0060	0.0048

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Remarks: