



EXTENDED GAS ANALYSIS

V0005132 - 1 CONTAINER IDENTITY METER ID 15372 WELL LICENSE NUMBER 52135-2003-2043 LABORATORY FILE NUMBER

Shell Canada Limited ORIGINATOR PAGE 2

200 b-3-G/93-P-8/00 LOCATION (FM) Shell Bullmoose b-3-G/93-P-3 WELL NAME Bullmoose SHELL CANADA OR ELEV (M) 2000 SHELL CANADA OR ELEV (M) 2000

Bullmoose FIELD OR AREA Bullmoose POOL OR ZONE Shell Canada SAMPLER

TEST TYPE AND NO. Flowline TEST RECOVERY

POINT OF SAMPLE CORE LAB SAMPLE POINT ID

PUMPING FLOWING GAS LIFT SWAB

WATER MISC OIL MISC GAS MISC

TEST INTERVAL (PERF) (MIN) SEPARATOR RESERVOIR OTHER CONTAINER WHEN SAMPLED CONTAINER WHEN RECEIVED SEPARATOR OTHER

at 07:21 hrs Pressures, kPa (gauge) 8431 8825 @ 22 °C Temperatures, °C

DATE SAMPLED (YYYY) DATE RECEIVED (YYYY) DATE ANALYZED (YYYY) ANALYST AB AMT. AND TYPE CLASSUM MUD RESISTIVITY

| COMPONENT | MOLE FRACTION AIR FREE AS RECEIVED | MOLE FRACTION AIR FREE ACID GAS FREE | DENSITY AIR FREE AS RECEIVED |
|------------------|------------------------------------|--------------------------------------|------------------------------|
| H ₂ | 0.0004 | 0.0012 | |
| He | 0.0003 | 0.0006 | |
| N ₂ | 0.0415 | 0.1124 | |
| CO ₂ | 0.2608 | 0.0000 | |
| H ₂ S | 0.3800 | 0.0000 | |
| C ₁ | 0.3289 | 0.8847 | |
| C ₂ | 0.0001 | 0.0004 | 0.4 |
| C ₃ | Trace | Trace | Trace |
| iC ₄ | Trace | Trace | Trace |
| nC ₄ | Trace | Trace | Trace |
| iC ₅ | Trace | Trace | Trace |
| nC ₅ | Trace | Trace | Trace |
| C ₆ | Trace | Trace | Trace |
| C ₇₊ | Trace | 0.0004 | Trace |
| Total | 1.0000 | 1.0000 | 0.4 |

| | | | |
|---|----------|---|----------|
| CALCULATED GROSS HEATING VALUE Mbtu @ 15°C & 101.325 kPa (abs.) | | CALCULATED VAPOR PRESSURE kPa (abs.) @ 40 °C | |
| 21.48 | 33.62 | | |
| MOISTURE FREE | | PENTANES PLUS | |
| MOISTURE & ACID GAS FREE | | 30.4 | |
| CALCULATED TOTAL SAMPLE PROPERTIES (MFM) @ 15°C & 101.325 kPa MOISTURE FREE AS SAMPLED | | | |
| 1.286 kg/m ³ | 1.050 | 30.4 | |
| DENSITY | | RELATIVE DENSITY | |
| RELATIVE MOLECULAR MASS | | | |
| CALCULATED PSEUDOCRITICAL PROPERTIES | | | |
| AS SAMPLED | | ACID GAS FREE | |
| 6600.8 kPa (psia) | 286.7 °C | 4458.0 kPa (abs.) | 163.2 °C |
| P _c PROPERTIES @ 15°C & 101.325 kPa | | GAS COMPRESSIBILITY | |
| DENSITY | | RELATIVE DENSITY | |
| MOLECULAR WEIGHT | | @ 15°C 101.325 kPa | |

REMARKS:
 * H₂S determined in the field by Tutweiler = 38.00%
 Lab H₂S by Gas Chromatography = 26.48

Evolved sample

NOTE: THE GROSS HEATING VALUE HAS BEEN CALCULATED IN ACCORDANCE TO AQA REPORT #1 AND ALL PROPERTIES HAVE BEEN CALCULATED UTILIZING CPA 2148 - 00 PHYSICAL CONSTANTS.