



EXTENDED GAS ANALYSIS

V0005132 - 1 CONTAINER IDENTITY
 SHELL CANADA LIMITED METER ID
 200 b-3-G/93-P-3/00 LOCATION (LWS) SHELL BULLMOOSE b-3-C/95-P-3 OPERATOR
 Bullmoose FIELD OR AREA Bellouy WELL NAME
 Shell Canada POOL OR ZONE
 52135-2003-2043 LABORATORY FILE NUMBER
 2 PAGE

TEST TYPE AND NO. Flowline TEST RECOVERY
 POINT OF SAMPLE CORE LAB SAMPLE POINT ID
 PUMPING FLOWING GAS LIFT SIBS
 WATER OIL GAS
 TEST INTERVAL & PERCS (PERCENT)
 SEPARATOR RESERVOIR OTHER 8481 °C 8625 @ 22 °C
 CONTAINER WHEN SAMPLED CONTAINER WHEN RECEIVED
 SEPARATOR OTHER
 Pressures, kPa (gauge) Temperatures, °C

at 07:21 hrs
 2003 07 23 DATE SAMPLED (Y/M/D) 2003 07 23 DATE RECEIVED (Y/M/D) 2003 07 23 DATE ANALYZED (Y/M/D)
 AB ANALYST
 SMT. AND TYPE CLASSIFICATION
 MISC. QUALITY

COMPONENT	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	DRY AIR FROES AS RECEIVED
H ₂	0.0004	0.0012	
He	0.0003	0.0009	
N ₂	0.0415	0.1124	
CO ₂	0.2608	0.0000	
H ₂ S	<u>0.3800</u>	0.0000	
C ₁	0.3289	0.8647	
C ₂	0.0001	0.0004	0.4
C ₃	Trace	Trace	Trace
IC ₄	Trace	Trace	Trace
C ₄	Trace	Trace	Trace
IC ₆	Trace	Trace	Trace
C ₅	Trace	Trace	Trace
C ₆	Trace	Trace	Trace
C ₇₊	Trace	0.0004	Trace
Total	1.0000	1.0000	0.4

CALCULATED GADGE HEATING VALUE Meter @ 15° & 101.325 kPa (abs.) <u>21.48</u>		CALCULATED VAPOR PRESSURE kPa (abs.) @ 40 °C <u>33.62</u>	
MOISTURE FREE <u>1.286</u> kg/m ³		MOISTURE & ACID GAS FREE <u>1.050</u>	
CALCULATED TOTAL SAMPLE PROPERTIES (MFM) @ 15°C & 101.325 kPa MOISTURE FREE AS SAMPLED <u>30.4</u>			
DENSITY		RELATIVE DENSITY	
CALCULATED PSEUDOCRITICAL PROPERTIES AS SAMPLED ACID GAS FREE			
<u>6600.8</u> kPa (abs.)	<u>296.7</u> °C	<u>4458.0</u> kPa (abs.)	<u>183.2</u> K
C _p PROPERTIES @ 15°C & 101.325 kPa		GAS COMPRESSIBILITY	
DENSITY		SUPER COMPRESSIBILITY	
MOLECULAR WEIGHT @ 15°C 101.325 kPa		@ 15°C 101.325 kPa	

REMARKS:
 H₂S determined in the field by Tutweiler = 38.00%
 Lab H₂S by Gas Chromatography = 25.4%

Evacuated sample

NOTE: THE GADGE HEATING VALUE HAS BEEN CALCULATED IN ACCORDANCE TO AGA REPORT 88 AND ALL PROPERTIES HAVE BEEN CALCULATED UTILIZING CPA 2141-90 PHYSICAL CONSTANTS.