

Lakes Oil N.L.
 Level 11
 500 Collins Street
 MELBOURNE VIC 3000
 Australia



The tests, calibrations or measurements covered by this document have been performed in accordance with NATA requirements which include the requirements of ISO/IEC17025 and are traceable to national standards of measurement. This document shall not be reproduced except in full.

Accreditation No 2013

Attention: Jack Mulready

Project 04PEAD04474
Client Ref: Letter 10/05/04

Customer Sample ID Wombat-2, CHDST-1
Sample Type Gas
Date Sampled 09/05/2004
Time Sampled 0930 h
Temperature 16°C
Cylinder ID #006

GAS ANALYSIS

Test/Reference	Unit
----------------	------

Gas Analysis ASTM D 1945-96 (modified)

Nitrogen*	Mol %	1.13
Carbon Dioxide*	Mol %	< 0.01
Methane*	Mol %	92.30
Ethane*	Mol %	3.92
Propane*	Mol %	1.73
I-Butane*	Mol %	0.31
N-Butane*	Mol %	0.42
I-Pentane*	Mol %	0.06
N-Pentane*	Mol %	0.04
Hexanes*	Mol %	0.03
Heptanes*	Mol %	0.03
Octanes and higher hydrocarbons	Mol %	0.03
Total*	Mol %	100.00

Gas Parameters ASTM D 1945-96 (modified)

Average Molecular Weight*		17.65
Lower Flammability Limit*		4.69
Upper Flammability Limit*		14.82
Ratio Of Upper To Lower*		3.16
Wobbe Index*		51.55
Compressibility Factor*		0.9976
Ideal Gas Density (Rel to Air = 1)*		0.610
Real Gas Density (Rel to Air = 1)*		0.611
Ideal Nett Calorific Value*	MJ/m ³	36.33
Ideal Gross Calorific Value*	MJ/m ³	40.25
Real Nett Calorific Value*	MJ/m ³	36.42
Real Gross Calorific Value*	MJ/m ³	40.34
Gross Calorific Val Water-Sat Gas	MJ/m ³	39.54

Gas Parameters

The above results are calculated on an air and water free basis assuming only the measured constituents are present. The following parameters are calculated from the above composition at 15°C and 101.325 kPa (abs) using ISO 6976 and the physical constants from the GPSA SI Engineering Data Handbook 11 th Ed.

Authorised by: Michelle Fordham
Petroleum Chemist

Signature:



Accreditation No 2013

Final Report

- Indicates Not Requested

* Indicates NATA Accredited Test

Samples will be discarded after 30 days unless otherwise notified.

Amdel Limited shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Amdel Limited be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

The samples were not collected by Amdel staff.