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Accredited for compliance with ISO/IEC 17025

Accreditation No 2013



Certificate of Analysis

Santos Limited
GPO Box 2319
ADELAIDE SA 5000
Australia

Attention: Noel Dowdell

Project 08PEAD0018631
Client Ref: 849485-101

Customer Sample ID	West Merreeie
	15
Sample Type	Gas
Date Sampled	18/05/2008
Time Sampled	1445-1515h
Pressure	2412kPag
Temperature	29°C
Cylinder ID	GPA751
Test/Reference	Unit

Hydrotesting Cyl
Hydrotesting* Pass

GAS ANALYSIS

Test/Reference Unit

Gas Analysis ASTM D 1945-96 (modified)

Nitrogen	Mol %	8.37
Carbon Dioxide	Mol %	0.02
Methane	Mol %	71.20
Ethane	Mol %	12.57
Propane	Mol %	4.74
I-Butane	Mol %	0.51
N-Butane	Mol %	1.34
I-Pentane	Mol %	0.35
N-Pentane	Mol %	0.40
Hexanes	Mol %	0.31
Heptanes	Mol %	0.12
Octanes and higher hydrocarbons	Mol %	0.07
Total	Mol %	100.00

Gas Parameters ASTM D 1945-96 (modified)

Average Molecular Weight		21.73
Lower Flammability Limit		4.32
Upper Flammability Limit		15.19
Ratio Of Upper To Lower		3.52
Wobbe Index		50.73
Compressibility Factor (Z)		0.9968
Ideal Gas Density (Rel to Air = 1)		0.750
Real Gas Density (Rel to Air = 1)		0.752
Ideal Nett Calorific Value	MJ/m ³	39.87
Ideal Gross Calorific Value	MJ/m ³	43.94
Real Nett Calorific Value	MJ/m ³	40.00
Real Gross Calorific Value	MJ/m ³	44.08
Gross Calorific Val Water-Sat Gas	MJ/m ³	43.17

Test Description**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

Neil Thomas

Chemist

Michelle Fordham

Chemist

Accreditation No 2013

Laboratory Manager

Diane Cass

Operations Manager

**Final Report**

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Samples will be discarded after 30 days unless otherwise notified.

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NATIONAL HYDRO TESTING SERVICES

1 ELLEMSEA CCT. LONSDALE SA 5160
PH 8326 7755 MOBILE 0418 804 144

REGISTERED
MARK

REF

55-10 (GPA 751)

Date of Test:

8/08

Previous Test Date:

Reference Temperature:

14

Service:

I

TESTED IN
COMPLIANCE
WITH AS2030.1

CERTIFICATE OF TEST

29593

S.A.A.
APPROVED

TEST STATION No.: 308A

Client:

AMDEL

Serial No.:

AA0142

Specification No.:

DOT 3E 1800

Water Capacity:

.5L

Test Pressure:

2925 PSI

Working Pressure:

1800 PSI

Condition: External

Condition: Internal

HYDROSTATIC/VISUAL
TEST RESULT:

Passed

WEIGHT TEST: Passed

Good

Good

Recommendation or Remarks.

Average

Average

Poor

Poor

Approved Signatory: