



**TLOU ENERGY**

**Gas to Power in Botswana: Investor Presentation Q1 2016**

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## COMPETENT PERSONS STATEMENT

The gas resource estimates for the Lesedi CBM Project provided in this statement (refer slide 12) were originally released to the Market on 9 April 2015 (Announcement). Tlou confirms that it is not aware of any new information or data that materially affects the information included in the Announcement and that all of the material assumptions and technical parameters underpinning the estimates in the Announcement continue to apply and have not materially changed. The gas resource estimates are based on and fairly represents, information and supporting documentation and were determined by Dr. Bruce Alan McConachie of SRK Consulting (Australasia) Pty Ltd, in accordance with Petroleum Resource Management System guidelines. Dr. McConachie is considered to be a qualified person as defined under the ASX Listing Rule 5.42 and has given his consent to the use of the resource figures in the form and context in which they appear in this Presentation.



# OVERVIEW

## Delivering gas-to-power via CBM in a market with huge demand

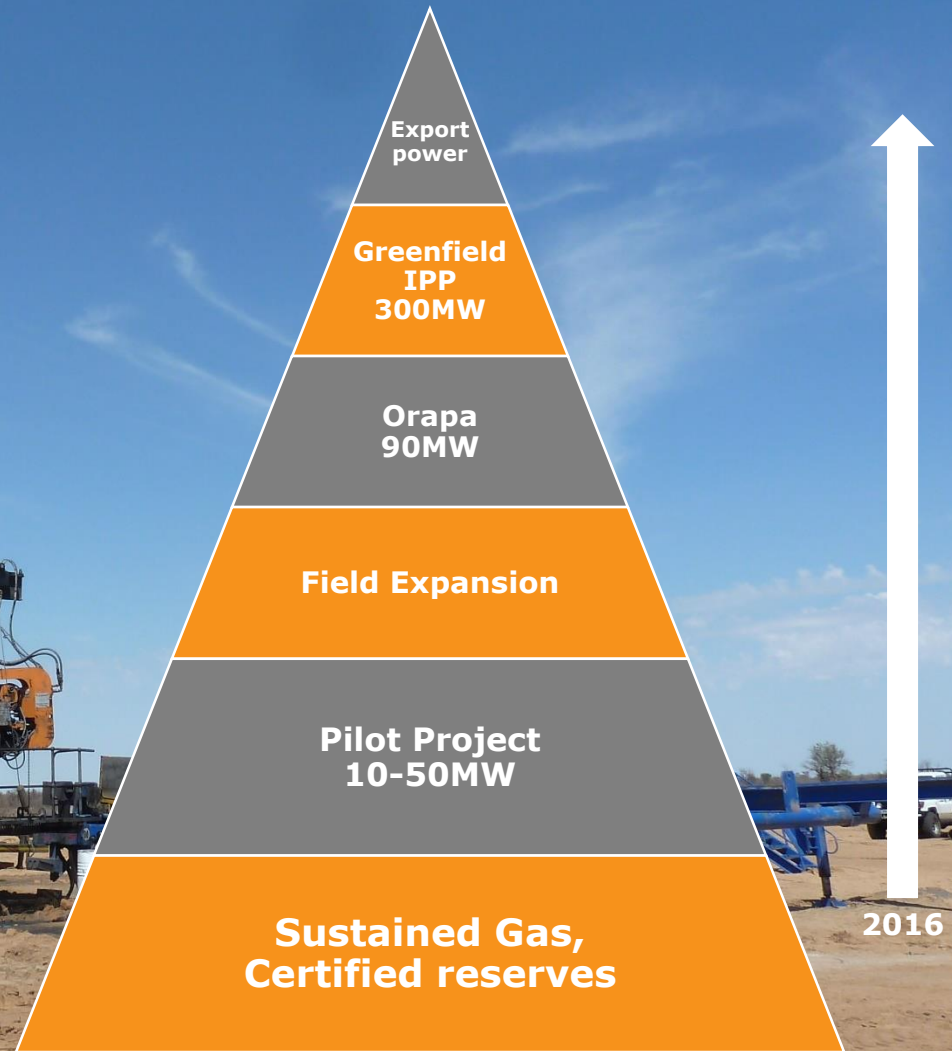
- Huge market – chronic energy shortage locally & regionally
- High power price – replace expensive imported power and diesel generation
- De-risked project, est. 2009, the most advanced CBM project in Botswana
- 8,300km<sup>2</sup> licence area, contingent resources in place
- First gas flared in 2014, reserves expected 2016
- 10MW pilot plant planned, offtake negotiations on-going
- Experienced team including pioneers of CBM in Queensland, Australia

MARKET	ASX / AIM
EPIC	TOU/ TLOU
SHARES IN ISSUE	206M
MARKET CAP	GBP - £9.51M AUD - \$14.39M
NOMAD	GRANT THORNTON
JOINT BROKERS	BRANDON HILL CAPITAL  OPTIVA SECURITIES LIMITED

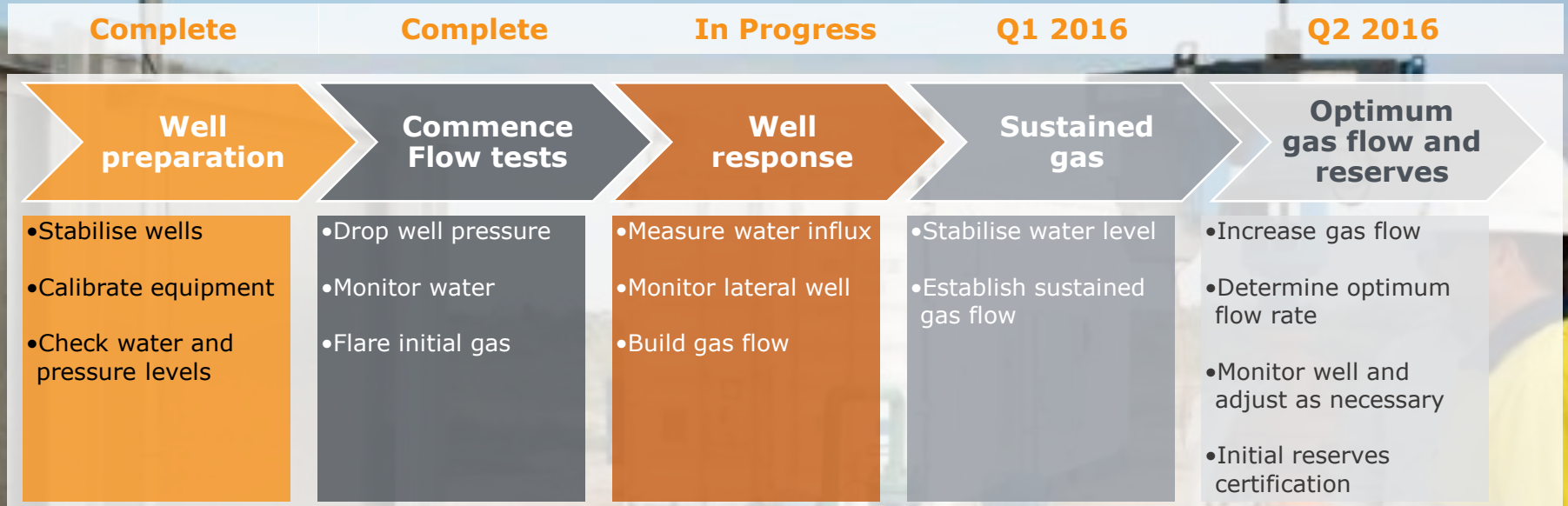
# VISION & STRATEGY

**Long term vision to build a mid-tier energy provider in Southern Africa**

- Current focus – Lesedi Gas to Power pilot project
- Develop a 10MW pilot plant
- Upscale pilot to ~50MW
- Supply Orapa 90MW power station
- 300MW greenfield plant
- Export power



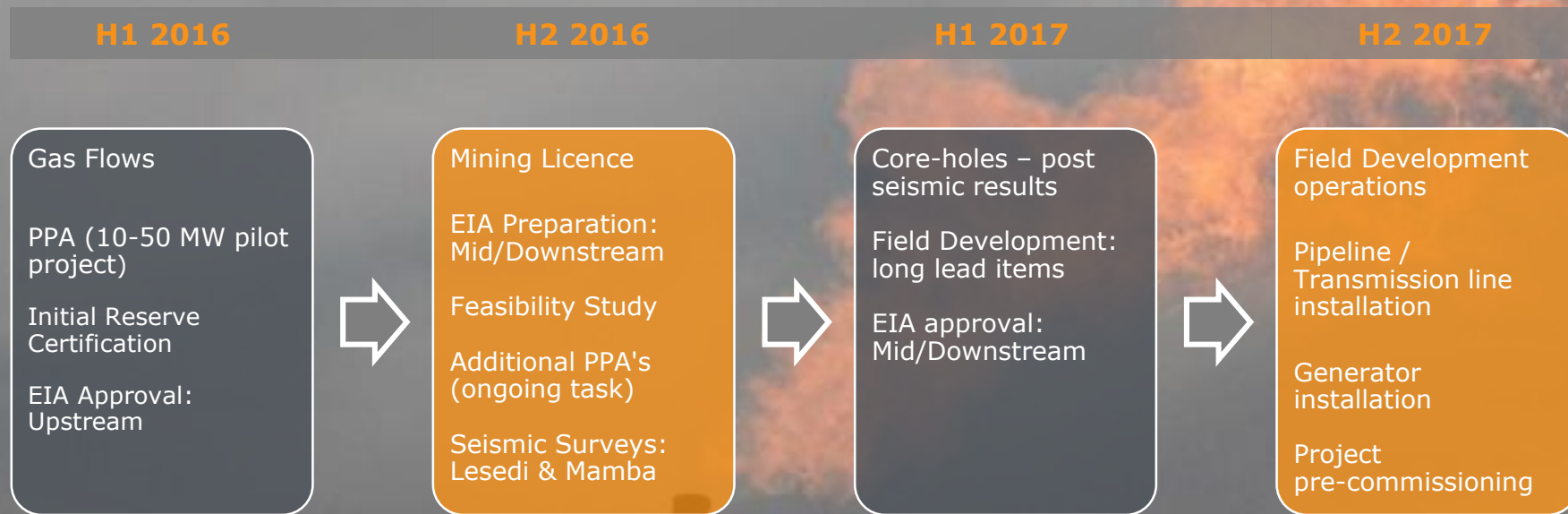
# PRODUCTION TESTING





# 10MW PILOT PROJECT TIMETABLE

Plan to deliver first gas to market via a 10MW pilot project



# 10 MW PILOT PROJECT - KEY STEPS



# STRONG TRACK RECORD

Led by an experienced team including a pioneer of CBM in Queensland

## Anthony (Tony) Gilby

**MD & CEO**

- Geologist with >30 years industry experience
- Co-founder of a number of CBM companies including Sunshine Gas
- Previous technical roles for ESSO & Exxon
- Took Sunshine Gas from small CBM explorer to certified 3P gas reserves >1,000PJ's
- Led takeover of Sunshine Gas by QGC (BG) in 2008 for A\$1.1bn

## Gabaake Gabaake

**Executive Director**

- Geologist and former Botswana Permanent Secretary, Minerals Energy & Water
- Strong government and industry relationships
- Past director of a number of international resource companies including Debswana, De Beers and DTC

## Martin McIver

**Chairman**

- 14+ years experience in finance and mining services
- Formerly with PwC
- Current General Manager – Services of the Workpac group

## Colm Cloonan

**Finance Director**

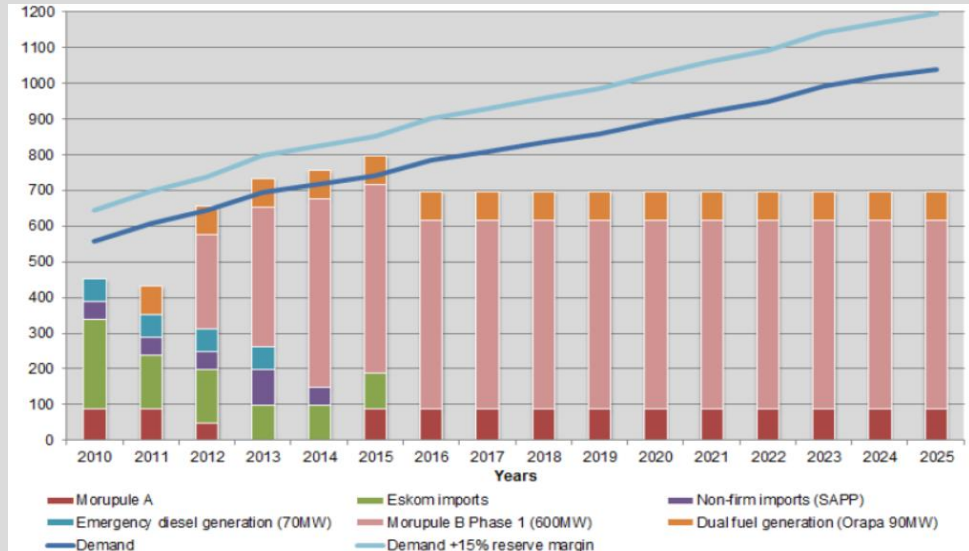
- Accountant (FCCA) with over 17 years' experience
- Worked in various industries including power generation in Australia
- In-depth company knowledge having served in various roles, including CFO, since 2009



# BOTSWANA'S POWER DYNAMIC

**As Botswana's reliance on non-firm imports and on-going diesel generation increases, the support for domestic sources of energy is strong**

- 68% increase in power demand to 1,030MW by 2022
- Botswana's 'Morupule B' power station
  - Currently operating at reduced capacity
  - Requires remediation
  - Significant local market
- Per capita consumption in 2011
  - Botswana 1,603kWh
  - South Africa 4,606kWh
  - Potential lucrative export market



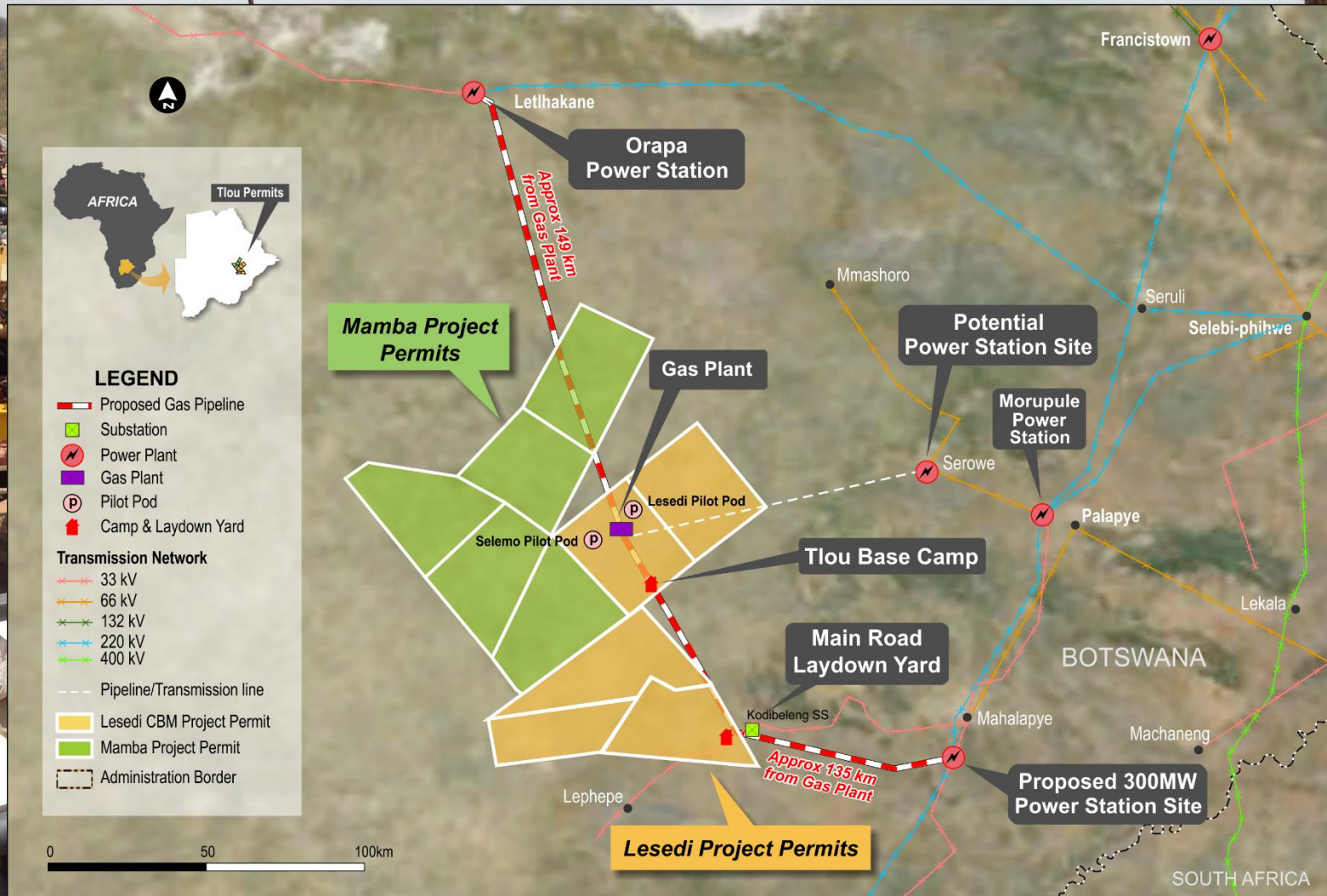
**Source: Norconsult Market Report, 2013**

**The Government is highly supportive of new energy projects.**

**The current energy crisis is a major impediment to Botswana's economic growth plans.**

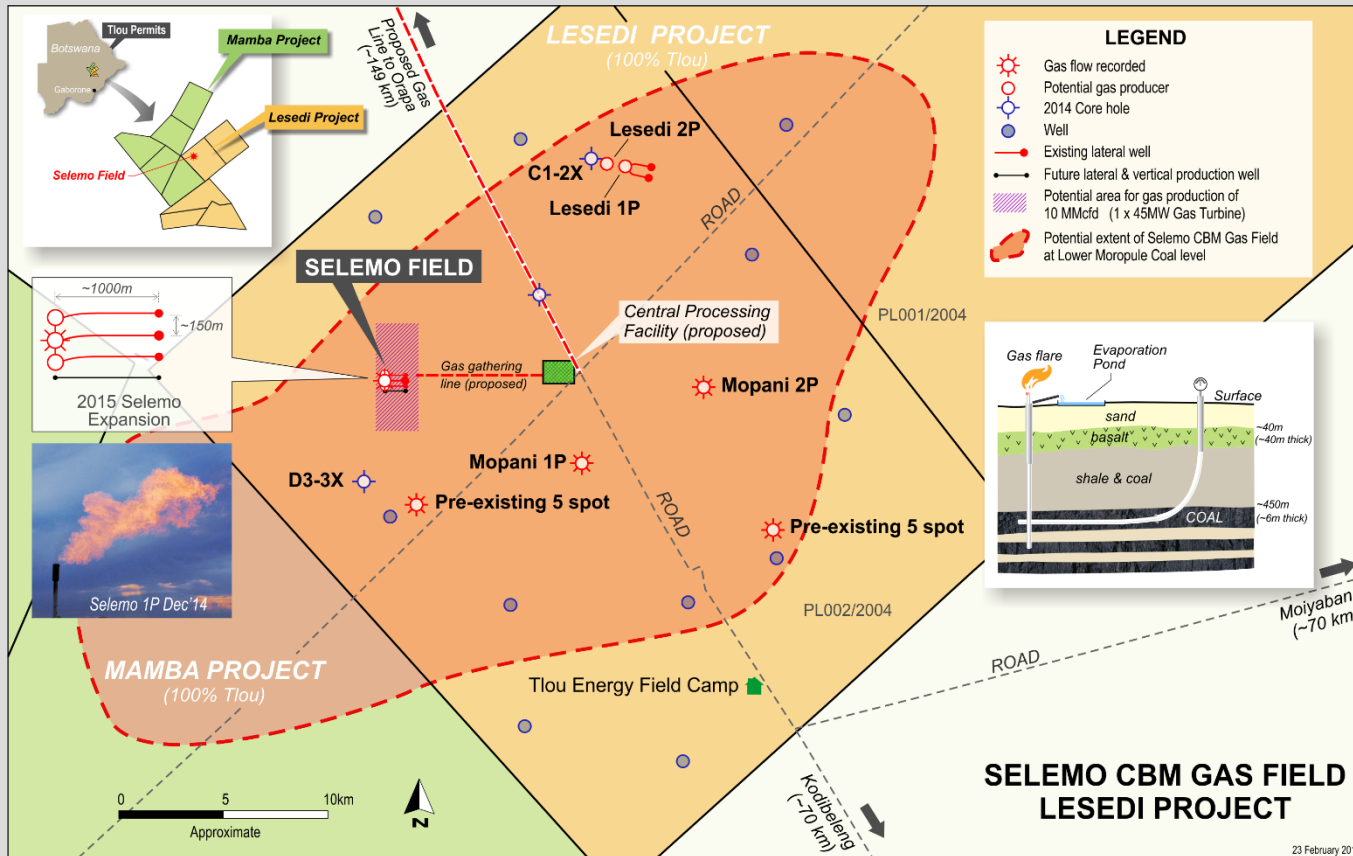
# GAS TO POWER PLANS IN BOTSWANA

Lesedi is ideally located for access to supporting infrastructure



# OVERVIEW OF LESEDI

Large licence area, significantly de-risked, Tlou operating since 2009



**Most advanced  
CBM project in  
Botswana**

**A\$43million  
invested to date**

**First gas flared  
December 2014**

**Gas flow testing  
in progress**

**Multiple market  
opportunities  
exist**



# LESEDI IN NUMBERS

## Certified Resource Statement

Category	OGIP <sup>(1)</sup> (BCF)	Unrisked Gross (100 Percent) (BCF)	Unrisked Net (100 Percent) (BCF)
<b>Contingent Resources (SRK, 2015)</b>			
Low Estimate (1C)	7.6	4.9	4.9
Best Estimate (2C)	367.8	239.1	239.1
High Estimate (3C)	5,347.5	3,295.5	3,295.5
<b>Prospective Resources<sup>(2)</sup> (NSAI, 2012)</b>			
Low Estimate	2,459.5	644.1	644.1
Best Estimate	7,653.1	3,239.0	3,239.0
High Estimate	14,326.8	8,596.1	8,596.1

1) OGIP = Original gas in place.

(2) The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

Source: SRK Consulting CPR, 2015

## Certified Contingent Resource

4.9 BCF (1C)	239 BCF (2C)	3,295 BCF (3C)
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## Technical Fundamentals

Coal depth	~260-764m
Cumulative net coal thickness (Average)	24m
Gas contents (Average)	4-6 m <sup>3</sup> /t (DAF)
Unstimulated reservoir permeability per DST	~2-5mD
Gas compositions	80-95% methane

# PROPOSED MARKET OPPORTUNITIES

**Multiple market opportunities – significant demand for Tlou's product endorses strategy to scale Lesedi following successful commissioning of 10MW pilot plant**

Phase	Market	Opportunity	Strategy
1	Pipeline or Transmission lines	<ul style="list-style-type: none"><li>• Grid-connected power supply, initially to 10MW and scalable as gas production increases</li></ul>	<ul style="list-style-type: none"><li>▪ Complete production testing and expand Selemo pilot sufficient to supply initial 10MW</li></ul>
2	Pipeline	<ul style="list-style-type: none"><li>▪ Supply Orapa Power Station</li><li>▪ Replace expensive diesel generation with cleaner CBM</li></ul>	<ul style="list-style-type: none"><li>▪ Existing Orapa Power Station has 2 x 45MW diesel fired generators</li><li>▪ Fuel cost estimated by Norconsult in 2013 of US\$0.40/kWh</li></ul>
3	Power Station	<ul style="list-style-type: none"><li>▪ New gas-fired generation opportunities (300 MW IPP Project)</li></ul>	<ul style="list-style-type: none"><li>▪ Supply growth in Botswana and regional markets</li></ul>



## INVESTMENT CASE

Most advanced gas project in  
Botswana

Huge regional demand for  
power

Premium  
power price

Low cost  
environment

Multiple  
market  
opportunities

Experienced  
team



## CONTACT

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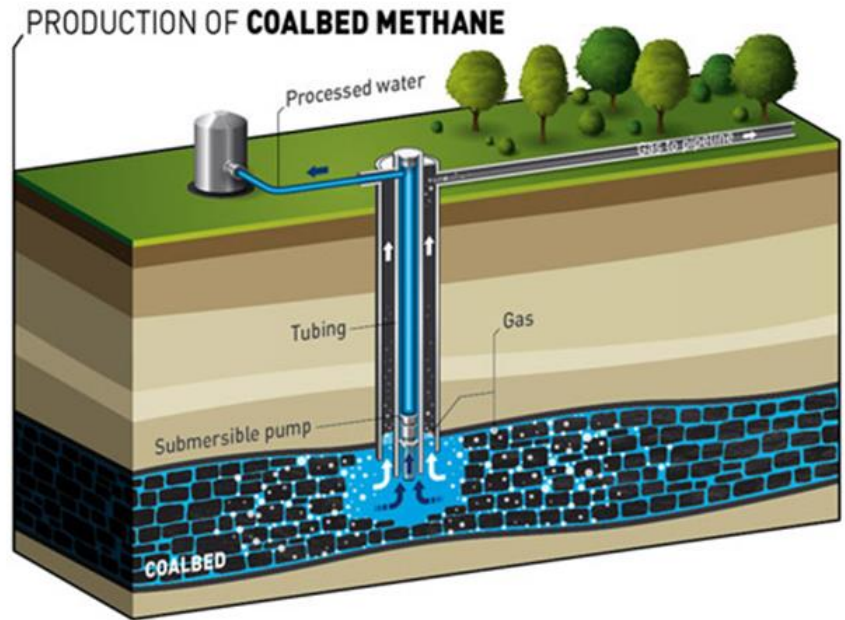
# APPENDIX





# COAL BED METHANE (CBM)

- Chemically identical to other sources of gas but is produced by non-conventional methods
- Extracted from coal seams rather than sandstone reservoirs
- Main component from natural gas is methane
- Typically found at depths of 400m – 1,000m enabling lower drilling costs per well in comparison to conventional gas wells
- Emerging markets, notably India & Africa are now looking to unlock the potential of CBM due to cost advantages & energy crisis



## CBM Production Process

Drill into & then  
along coal  
seams

Initially  
releasing water  
& then natural  
gas

Gas collected at  
the surface –  
processed &  
used for  
generation,  
LNG etc.



# THE GLOBAL CBM INDUSTRY

## China

- First CBM project in 1995
- By end of 2015 2,850 MW will supply 3.2 Million households with CBM/CMM fuels

SINO Gas & Energy

Sinopec Corp.

GREEN DRAGON GAS

Chevron  
Human Energy

Anadarko  
Petroleum Corporation

EXXON

bp

ConocoPhillips

## USA

- Pioneered CBM industry in 1970-80's
- Approx. 7% of all gas from CBM

## Australia

- CBM contributed 87% of Queensland gas production in 2014
- CBM expected to contribute to 35-40% of eastern Australia gas by 2020

origin

Shell

Santos  
We have the energy.

BG GROUP

Chevron  
Human Energy

## OPERATING IN BOTSWANA

**Major power  
deficiency in  
the region**

**High  
energy  
prices**

**Stable  
jurisdiction**

**Supportive  
government**

**Attractive  
operating  
and  
regulatory  
regime**

**Extensive  
coal  
resources**

**Large  
mining  
industry to  
power**





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