



CHAUCER ENERGY LTD

IN-SITU GASIFICATION (ISG)

***DOMESTIC GAS SUPPLY
FOR CHILE***



KEY VALUE PROPOSITIONS FOR CHAUCER ENERGY

- ❑ Chile suffers from a severe shortage of domestic gas production, and is vulnerable to international energy price fluctuations
- ❑ Chile has vast untapped energy resources in the Magallanes District suitable for application of ISG technology.
- ❑ Chaucer Energy is the world leader in application of ISG technology for gas production
- ❑ Chaucer Exploration Concessions have an established JORC Resource of 100Mt of coal to be converted into syngas, with the capacity for major resource expansion.
- ❑ Syngas will initially be used for production of electricity, and in the longer term for production of chemicals such as methanol and/or urea



CHILE HAS LIMITED DOMESTIC ENERGY PRODUCTION

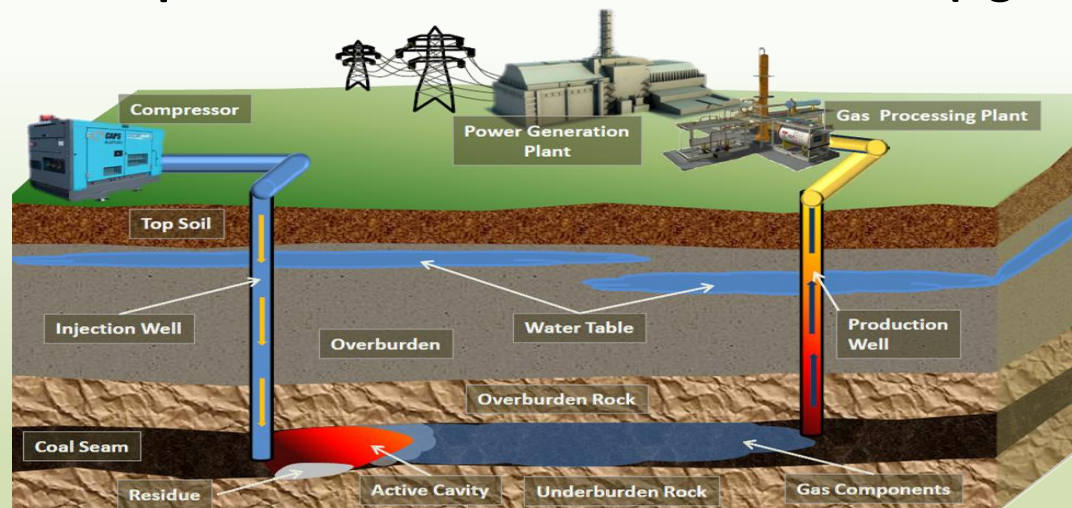


- ❑ Chile has one of the highest GDP's/ capita in Sth. America
- ❑ It currently imports 95% of its oil demand, 80 % of its natural gas demand and 100% of its coal demand
- ❑ Chile imports 100% of its urea demand (made from natural gas) of about 500,000t/a at an annual cost of US\$200m
- ❑ Chile's lack of domestic energy production makes it highly vulnerable to international energy pricing pressures
- ❑ For electricity generation, Chile has substantial solar power generation in the North, but uses diesel, gas and firewood in the Magallanes Area in the South
- ❑ Gas will be needed as a bridging electricity source due to the intermittency of solar/wind energy supply



ISG PRODUCES A SYNGAS WITH A WIDE RANGE OF USES

- ❑ ISG product gas contains CH_4 , H_2 , CO_2 and CO , with a calorific value suitable for electricity production using gas engines and turbines
- ❑ Hydrogen and carbon dioxide can be combined to produce a range of chemicals including urea and methanol
- ❑ Chaucer plans to establish up to 10MW power plant in the first project stage, then power plant expansion and chemical manufacture (eg. urea, methanol).





CHAUCER ENERGY TEAM HAS WORLD-LEADING ISG EXPERTISE

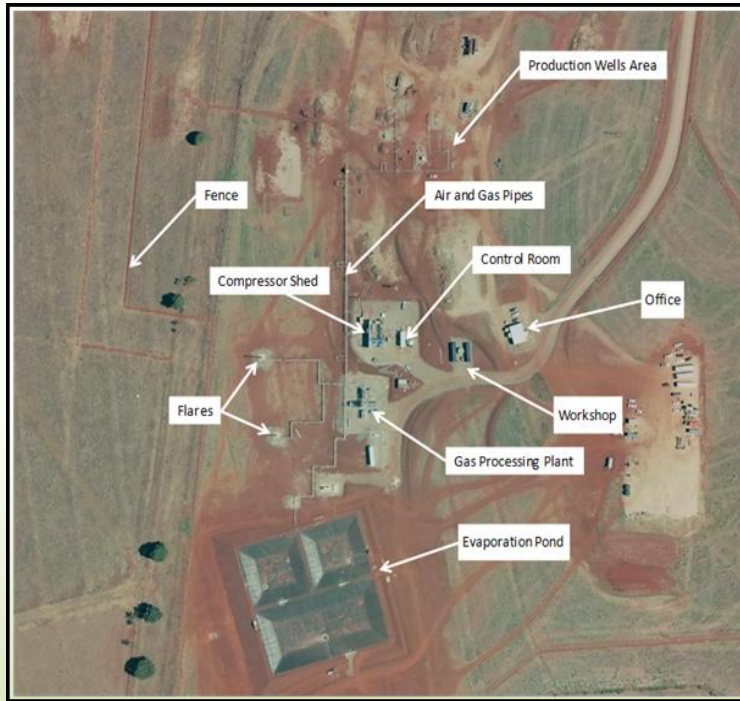
- ❑ Operated ISG gas production at Chinchilla Qld. for 2 years, gasifying 35,000t of coal, followed by successful rehabilitation**
- ❑ Operated ISG gas production for 2 months at Kingaroy Qld, with successful rehabilitation after shutdown caused by Qld. Govt policy change**
- ❑ Chaucer's long-term technology partner (Ergo Exergy) has led ISG technology demonstrations in Sth. Africa** and NZ
- ❑ Ergo Exergy is currently active on ISG projects in Alberta, Canada (see www.cvictus.com) and India with Coal India Ltd (see www.easterncoal.nic.in)

** For technical details see chapters in “Underground Coal Gasification and Combustion” edited by M. Blinderman and A. Klimenko and published by Elsevier



CHAUCER TEAM GAS PRODUCTION – QUEENSLAND ISG PROJECT

Site layout – initial gas production



Gas production flare





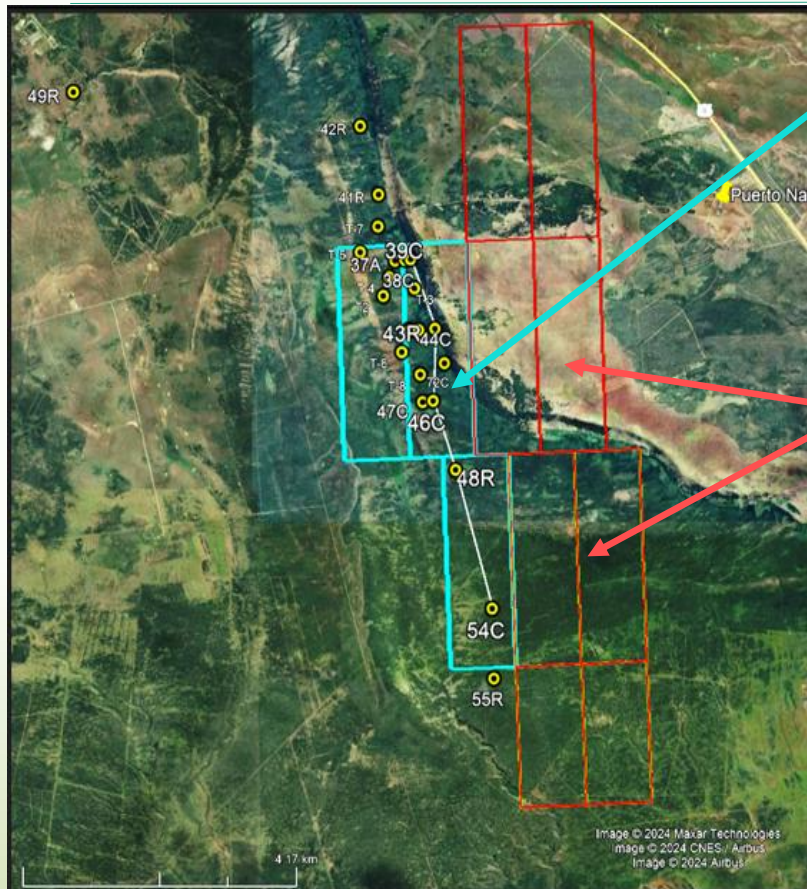
CHILE HAS A LARGE UNTAPPED ENERGY RESOURCE



- ❑ The Magallanes area in Chile's south contains a vast coal basin, producing limited gas for local use, supplemented by variable imports from Argentina
- ❑ Coal mining occurred in the past near the outcrop line, but has been abandoned
- ❑ Chile's National Energy Agenda 2050 has Magallanes Basin coal gasification as an objective to expand local gas resources
- ❑ The depth of coal across the basin (up to 1000m) makes ISG an ideal option to meet this Agenda
- ❑ Chaucer has acquired ISG Concessions near the town of Puerto Natales



CHAUCER ENERGY CHILEAN ISG RESOURCE

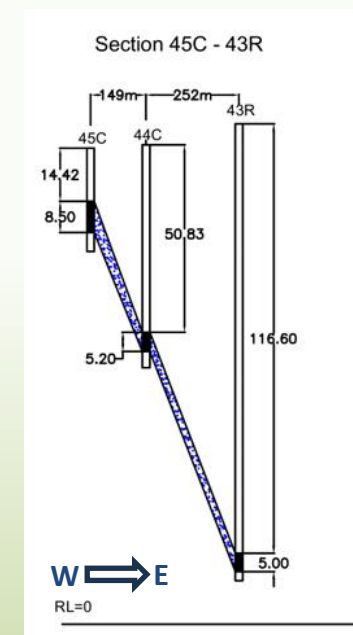
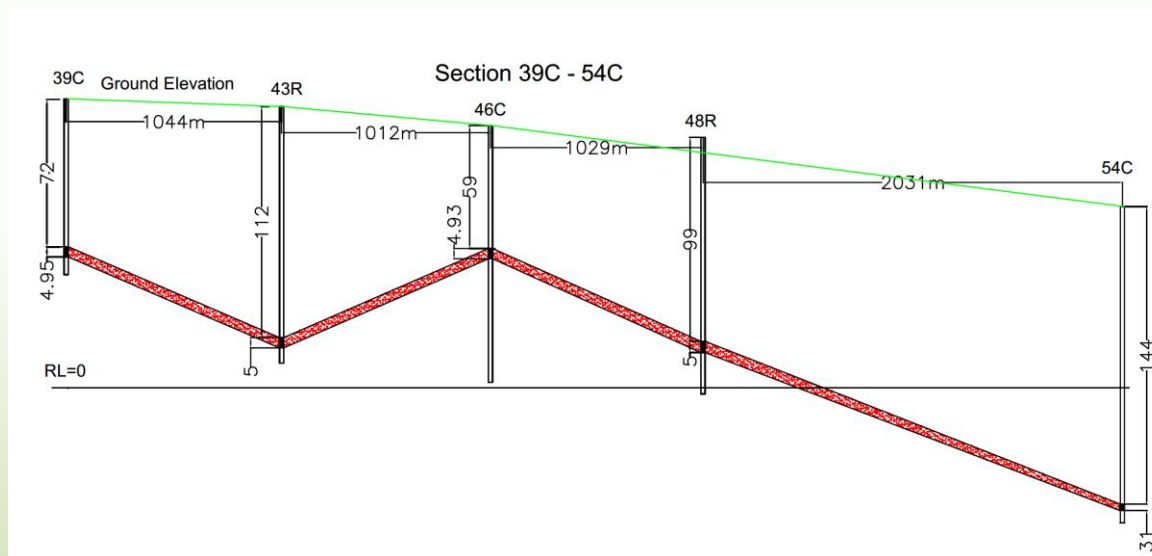


- ❑ Chaucer has Concessions Applications being processed covering a 600Ha area containing a JORC Resource of 50Mt of coal suitable for ISG
- ❑ This resource is sufficient to generate 100MW of power for over 30 years
- ❑ Chaucer currently holds Concessions covering 2000Ha with an additional ISG JORC Resource of 50Mt of coal
- ❑ This combined resource base would be sufficient for generation of power and gas, followed by production of urea and methanol for over 30 years.
- ❑ Significant resource expansion potential exists on these Concessions



COAL SEAM CONTINUITY FROM EXISTING EXPLORATION DATA

- ❑ North - South Section 5 km long shows continuity of 5m thick coal seam parallel to outcrop line within Concession areas being currently processed
- ❑ West – East Section 0.4km long shows continuity of 5m thick coal seam down-dip into granted Concessions





PROJECT DEVELOPMENT PHASES

- ❑ Preliminary project planning indicates the following timeline:
 - Year 1 - Site evaluation, hydrogeological studies, environmental reports, local gas/power market assessment, preliminary feasibility studies
 - Year 2 - Environmental approvals, well installation, prepare for ignition
 - Year 3 - Ignition, 3 month's testing, then up to 10MW power generation
 - Year 4+ - Planned expansion of power/gas production, feasibility studies for urea production
- ❑ Past cost estimates in competitive markets for power generation in Australia have shown excellent project returns
- ❑ The high cost of existing energy supplies in Magallanes and their current need for subsidies confirm that an ISG power project will be highly profitable
- ❑ For urea production, current estimates by third parties indicate that cost of production will be US\$100-200/t compared to current prices >US\$300/t



ISG HAS SIGNIFICANT ENVIRONMENTAL ADVANTAGES

ISG has the following significant advantages in its operation :

- a minimal surface footprint, minimal land use and minimal pollution from noise, dust etc.
- a quick progressive release and restoration of operating areas
- Continuous monitoring of environmental performance
- CO2 production to be used in chemical manufacture, and/or sequestered in remnant cavity underground or in deep coal seams
- Rapid start-up and capacity for expansion, and significant cost of production advantages
- A range of potential end uses – power generation, heating and chemical manufacture
- Lack of competing uses for Magallanes Basin deep coal seams



LED BY AN EXPERIENCED BOARD AND MANAGEMENT

Malcolm McAully – Chairman

- Malcolm has a strong business background with experience in a wide range of industries including financial services, energy generation and agribusiness. Past Chairman of three ASX Listed companies, including ISG company Cougar Energy Ltd, and is currently Chairman of ASX Listed Pure Foods Tasmania Ltd (ASX:PFT)

Dr Len Walker - Managing Director

- Len has qualifications and experience in geotechnical engineering, and for 10 years developed emerging ASX Listed companies in the resources area. He has since spent over 20 years in advancing ISG projects, both in Australia and internationally. He founded Chaucer Energy in 2016 to develop ISG operations in Chile

Valeri Melik – Executive Director and COO

- Valeri has qualifications in Electrical engineering and a wide background as a project manager. He led the planning and on-site execution of the Kingaroy ISG project, including its successful rehabilitation after policy changes in the Qld Govt. He has worked on ISG projects with Dr Walker since 2008

Dr Michael Blinderman – ISG Specialist

- Founder and CEO of Ergo Exergy Technologies Inc., internationally leading ISG technology provider to ISG gas producing projects in Australia, South Africa, New Zealand and the FSU, and an associate of Dr Walker since 1996. Lead author of recently published ISG text book



WITH A QUALITY ON-GROUND TEAM IN CHILE

Kura Minerals Team



Thomas Eggars
Head of Economic Geology



Alvaro Florez
Head of Legal

- Chaucer has been working with Kura Minerals for over six years
- The Kura team provides experienced geological and legal advice, and close contact with key Chilean Govt Depts responsible for overseeing ISG operations

Working with Chilean partners, contractors and labour



Dr. Len Walker

Managing Director

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Providing energy security for a fast-growing economy