

# **SALTERNAS LIMITED**



## **INVESTMENT IN SOLAR SALT IN SOMALILAND** September 2019



**SALTERNAS LIMITED**

Combining Philanthropy and Investment



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# Salternas (The Company)

- Salternas Limited – an unlisted public company registered in Australia.
- Salternas GmbH – a fully-owned subsidiary of Salternas Ltd. A private company registered in Germany (The Operator).



# Vision

- To be the World's largest Solar Salt Producer (5MMT - 2023/13MMT – 2028)
- To create wealth for the investors and stakeholders
- To eliminate famine in Somaliland
- To create national economic growth and wellbeing, leading to the reduction of poverty and subsequently the reduction of conflict





# Highlights

- A 25 year (renewable) agreement for the lease of sufficient oceanfront land, between Salternas and the Ministry of Investment & Promotions, Republic of Somaliland (October 2018)
- Registration of Salternas Limited as an Australian Unlisted Public Company
- The creation of Salternas GmbH, a fully owned subsidiary of Salternas Ltd to be the operating company (May 2018)
- Commencement of the economic and technical feasibility study (2018)
- Of note is that this Project is a non-speculative Engineering & Production Undertaking, with a perpetual natural resource; therefore, there is no uncertainty or requirement to prove-up ore reserves as with traditional mineral exploration projects



# Project Economic Overview

- In this Project Economic Overview, the following (2019) market prices have been used:
- NaCl                      US\$42.00/Tonne
- SOP                        US\$600/Tonne
- Food                        US\$600/Tonne



# Project Economic Overview

• <b>Project Life</b>	25 years – renewable for a further 25 years	September 2019 AUD Conversions
• <b>Gross Revenue</b>	US\$14.75 Billion (Ave US\$737 MM/year)	AU\$21.5 Billion (Ave AU\$1.08 B/y)
• <b>Cumulative Cash Flow</b>	US\$6.7 Billion	AU\$9.7 Billion
• <b>NPV<sub>4</sub>/NPV<sub>6</sub></b>	US\$3.4 Billion/US\$2.4 Billion	AU\$5 Billion/AU\$3.5 Billion
• <b>IRR</b>	31%	
• <b>Pre-feasibility expenditure to-date</b>	US\$1.8 MM	AU\$2.66 MM
• <b>CAPEX</b>		
• Stage 1 (NaCl)	US\$250 MM	AU\$370 MM
• Stage 2 (SOP)	US\$150 MM	AU\$222 MM
• Stage 3 (Agrifood)	US\$50 MM	AU\$74 MM
• <b>Payback Time</b>	6.5 years	



# Estimated Project Production Overview (First 20 Years)

- **Salt (NaCl)** 229 million T/(Ave 13 million TPA)
- **Sulphate of Potash (SOP)** 4.563 million T (Ave 228 kTPA)
- **Food & Agriculture** 2.8 million T/(Ave 155 kTPA)
- **AISC (NaCl)** US\$12/T (AU\$15/T)



# Experienced Board & Management



**Eurling Professor  
Colin Roberts LLM,  
PGDipICA, BEng  
(Mining), PEng,  
CPetEng, CSci,  
FAusIMM(CP), FCIARB  
Chairman**

International Resources Geo-strategist & Sovereign Risk specialist. A graduate of the Western Australian School of Mines, University of Dundee and Queen Mary College, University of London, he is a Chartered Petroleum Engineer, Chartered Mining Engineer, Chartered Scientist, Resources Legal Academic International Commercial and Investment Arbitrator, Accredited International Commercial Mediator, Adjudicator, Expert Determiner and Dispute Board Member, with over 40 years of Multi-disciplinary resource industry experience, most of which has been in the developing world and Africa in particular.



**John Balfe  
CEO**

40 years Civil Engineering and Construction project supervision and management. He has a long track record of ensuring projects are delivered to the highest quality, within budget by effectively organizing, managing and utilizing all resources. He has established a strong personal relationship with various arms of Government in Somalia over many years. He has been trusted to introduce Australian companies to tender for Government works. The relationship has survived and continues today. He was appointed Consultant to Ministry of Public Works Mogadishu Somalia, to complete feasibility study for reconstruction of war damage Government property. Somali Air Traffic Management



**Wally Hughes  
Technical Director**

Wally Hughes is a registered builder with 48 years of experience in construction. Pertinent experience relating to the Somaliland Solar Salt project, is that he was part of the construction team on both the Port Hedland and the Dampier solar salt fields. He was also a contractor at Useless Loop for the Shark Bay Salt Company. Wally Hughes has been either a contractor or part of the team on many mining and civil projects throughout Western Australia. Experienced in all construction and civil aspects involved in the salt field from the sluice gates through to the infrastructure. Along with John Balfe, Wally located and evaluated the site for the salt field in Somaliland. Together they investigated and ensured that the site is one of the world's most ideal solar salt sites.



**Mohamoud Jirdeh  
Hussein  
Director**

A highly respected Clan elder who is well received in both Somalia and Somaliland where his skills as a mediator and negotiator are well known. He has twice served as a Minister in the Government of Somalia and is a director of The Somali Central Bank. He was appointed Deputy Chairman of the Somali National Government Reconciliation Committee; Minister of Health; Minister of Labour, Social Affairs and Youth and Sport; Somali Diplomatic Representative at the London Olympics and attended the Non-Aligned Movement Conference in Iran. The Jirdeh Hussein Company, based in Mogadishu, has a long history of trade throughout the Gulf region and has provided essential support to the peace keeping effort in Somalia.



**Bradley Green  
Company Secretary**

A Mining Economist by profession with over 25 years' experience in the mining industry, mainly focussing on the evaluation and development of early stage mining projects in Australia and overseas. His overseas experience includes projects in Pakistan, China, Philippines, Indonesia, Iran, Papua New Guinea and various African countries, including Sierra Leone and Namibia. Over the years Bradley has held board and management / consulting positions with several mining companies and provided feasibility advice to various companies, including Extract Resources, Harmony Gold Mining Co, BHP Billiton and Rio Tinto. Bradley has a Bachelor of Business (Economics) and Graduate Diploma in Business Management from the University of NSW, New South Wales.



**Sten Soderstrom  
FAICD, FAIEAust,  
CPEng, MSc (Operations  
Research), BEng (UK)  
Feasibility Study  
Manager**

An experienced board member and executive with over 30 years of international project management, construction, development and operations experience in the mining and mineral processing industry covering iron ore, gold, polymetallic and base metal projects from \$100M to \$5b. Experience from Australia, New Zealand, Indonesia, India, Philippines, Sweden and several African countries. He has proven experience with ASX listing requirements, continuous disclosure obligations, good corporate governance and duties and responsibilities of Company Directors in the Australian regulatory framework. He provides Project Development Management.

# The Products (Stage I – NaCl)

- Salt (NaCl) is an essential element in the diet of humans, animals and plants. It is the most effective and widely used of all food preservatives and has numerous industrial and other uses.
- NaCl is the primary product of this project, generating a gross revenue of US\$6.8 Billion or US\$343 MM/year.
- Solar Salt Projects, which replace vacuum salt may earn carbon credits [Certified Emission Reduction (CER)].





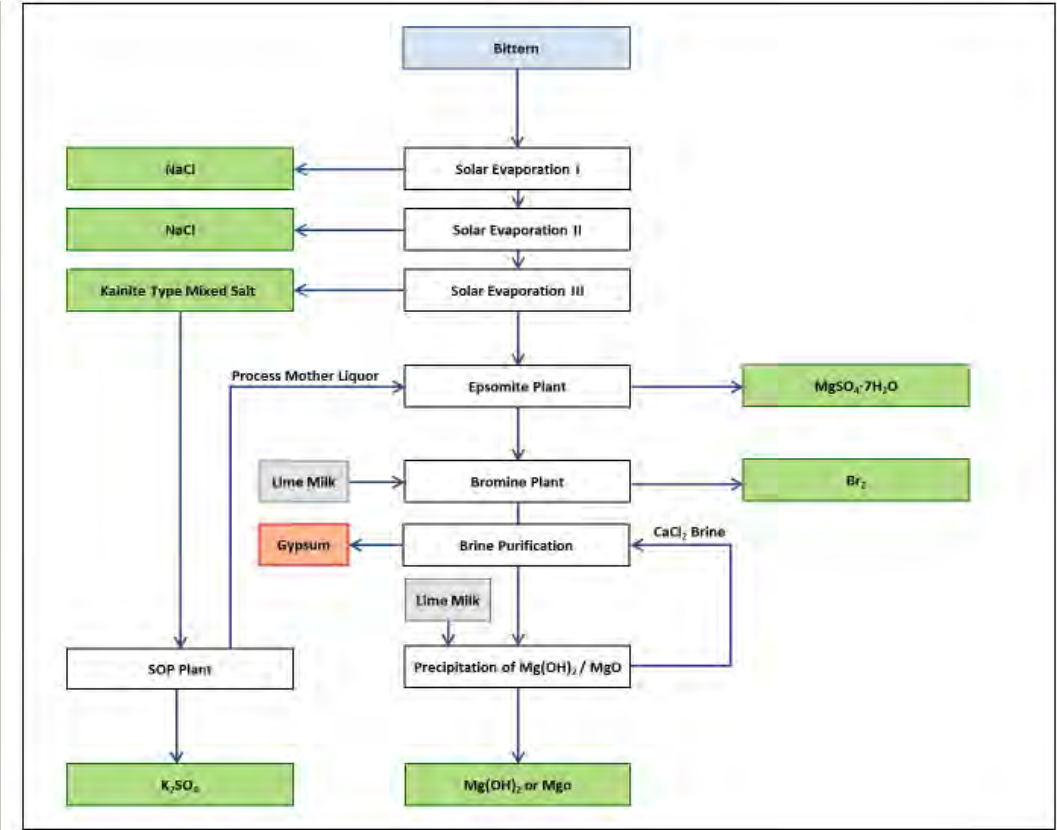


# The Products (Stage 2 – SOP)

A by-product of solar salt production is generated from the “bitterns”, which is normally a waste product. This by-product, “SOP” (Sulfate of Potash) is a valuable product for fertilizers, especially important for plants that are sensitive to chloride. Since SOP, does not contain chloride, it is the preferred choice for many high value crops such as coffee, several fruits and vegetables. The fact that it contains two key nutrients for growing crops, potassium and sulphate, are the main reasons why SOP is considered a premium-quality potash that is valued currently greater than 500 US\$ per metric ton.

The gross revenue from this product is estimated to be US\$2.74 billion or US\$137 MM/year with little extra OPEX.

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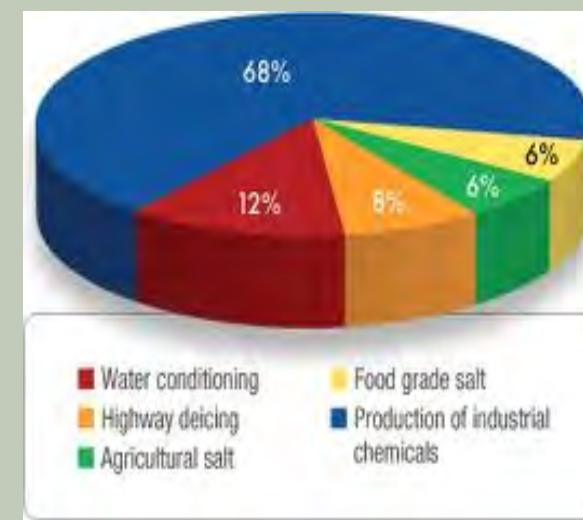
# The Products (Stage 3 – Food)

- The third stage will be the construction of desert greenhouses to take advantage of the fresh water generated by the solar evaporation. 140 kT/year of fresh food will be produced. This will be a commercial operation; however, in periods of drought, food and water will be provided to the population as relief; enough to sustain one million people. Annually, 6.2 million people are suffering in the Horn of Africa from lack of nourishment. Overall, some 388,000 acutely malnourished children are in need of critical nutrition support, including life-saving treatment for around 87,000 of these.
- The food production will generate a gross revenue of US\$1.7 Billion or US\$84 MM/year



# The Market

- Total World Salt Production is about 300,000,000 tons per annum
  - Demand increasing by about 4% (~12 MMT) per annum
- A very small proportion is used for human consumption
- >70% is used in the Chemicals Industry, for industrial, food, agriculture, snow and ice removal, soil stabilization, water softeners.
- The target for Salternas is the Chlor-Alkali Industry.
- Asia accounts for almost 45% of demand and current producers are not meeting market demand.







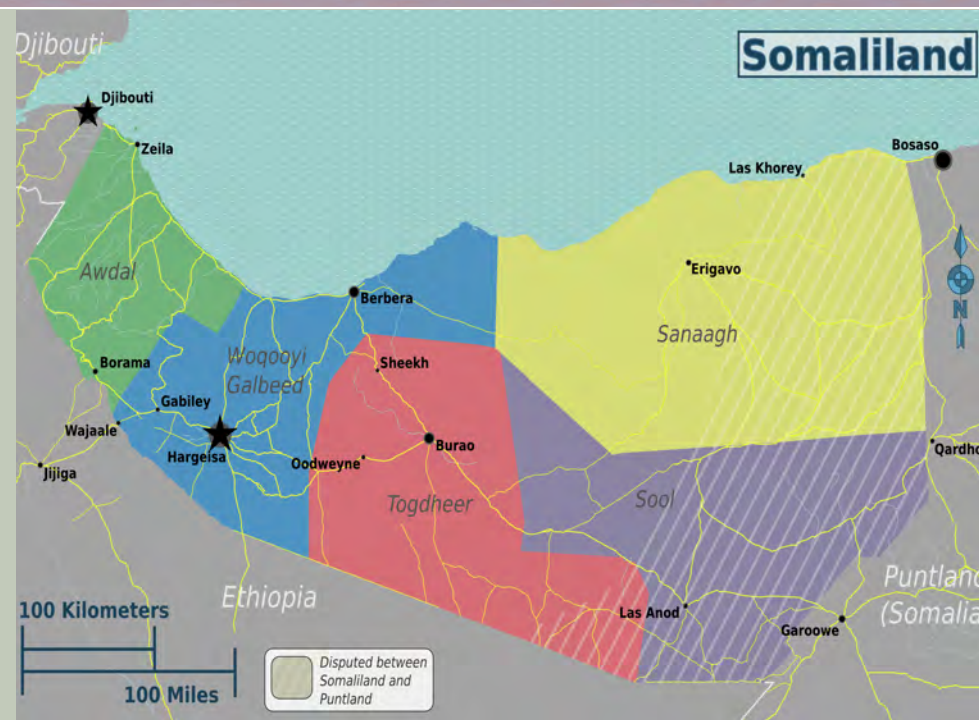
# Why Solar Salt is Better

- Solar Salt :
  - Is High Quality
  - Is inexpensive to produce
  - Employs renewable energy most effectively
  - Salt-fields are environmentally beneficial wetlands
  - Commands a premium due to its quality

# Somaliland

Somaliland is a self-declared state that is not yet internationally recognised. Somaliland is known as an autonomous region of Somalia. The advantages are: a stable Government and safe environment, the high salinity of the Gulf of Aden (36kg/T), proximity to major shipping lanes and an ideal climate for solar salt operations.

POPULATION	3.5 million
AREA	137,600 km <sup>2</sup>
LEGAL SYSTEM	Civil Law
OFFICIAL LANGUAGE	Somali, Arabic, English
CAPITAL	Hargeisa
INDEPENDENCE FROM SOMALIA	18 May 1991 (Unrecognised)



# Location Relative To Somalia







# Sovereign Risk

- It is not unknown that Somalia is one of the world's most challenging operating environments; however, in the autonomous region of Somaliland, comparatively more advanced institutional capacity and rule of law provides a more stable investment environment.
- Professor Colin Roberts, an expert of world-renown on sovereign risk, legal risk, foreign direct investment (FDI) and natural resource development has applied mechanisms to mitigate such risks to the foreign direct investor.

# Enter Salternas

Salternas has secured a 25 year contract with renewable terms of 25 years with the Somaliland Government to develop a solar salt project west of Berbera.

Salternas will be provided with between 150 to 250 square kms of ocean frontage to develop the project.

The project area has all of the essential elements for the production of high quality solar salt including low rainfall, high solar evaporation rates, steady winds, high salinity (36kg/T), minimal environmental concerns and minimal disruptions of local communities.



Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
© 2012 Cnes/Spot Image  
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10°45'14.99" N 43°49'18.20" E elev 9 m

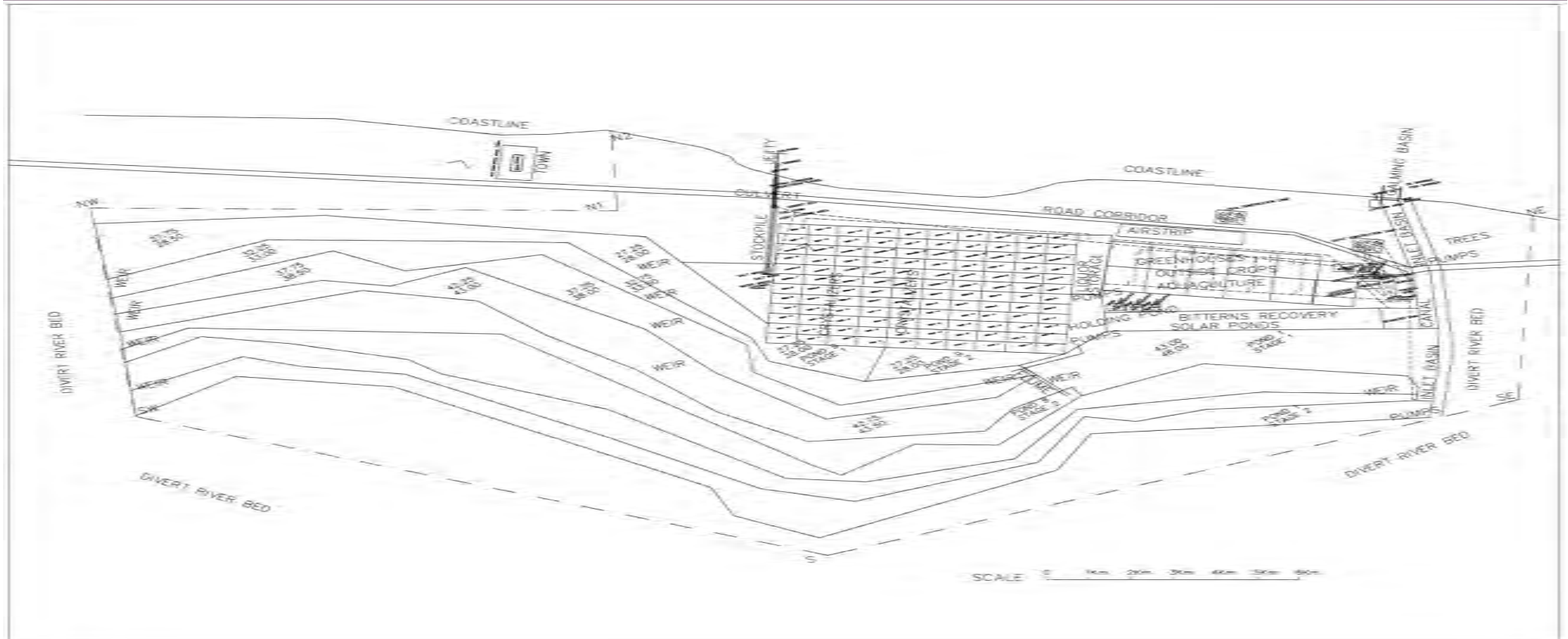
Google earth

Eye alt 38.53 km





# Site Layout





# Funding Strategy

- 1.
  - Raise funding of US\$10 million to complete the Definitive Feasibility Study. This would be from private and public investors meeting the highest ethical standards. Applications are currently with International Development Banks as the Project meets the ambitions and standards required.
- 2.
  - On completion of the DFS, we have been receiving encouraging feedback from Project Finance Suppliers to either finance the construction phase totally, or in combination with equity-listing on a major Exchange, such as Frankfurt, LSE or Toronto.
- 3.
  - The Company invites applications for 35,000,000 Shares at an Issue Price of **AUD 0.40** per share to raise **AUD 14 million (~USD 10 million)**. Shares issued under the Information Memorandum will be fully paid and rank equally with other Shares on issue.

# Project Execution Schedule

	1q	2q	3q	4q	5q	6q	7q	8q	9q	10q	11q	12q	13q
BFS													
Commercial Contracts In Place													
Project Finance													
Contractor Selection													
Long Lead Orders Placement													
Construction Stage One													
Commissioning													



# **A Vision for the Future**

**Partners and Investors Are Welcome**





# Contact

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Executive Chairman

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