

ASX Announcement 7 April 2021

# Landholding Increased by 864km<sup>2</sup> in the Gascoyne Region Prospective for Industrial Minerals and potential green hydrogen site

# Highlights:

- Province has identified and recently applied for a further 864km2 in the Gascoyne coastal region prospective for industrial minerals and for green hydrogen production to complement the industrial minerals and green hydrogen Projects in the Gascoyne region that are being acquired
- The additional tenements cover the Pleistocene formation marked as Significant Basic Raw Material areas of interest by GSWA
- Pleistocene dunal formations in the Gascoyne region have demonstrated world class potential, such as the Strandline Resources Coburn deposit (JORC Reserve of 523Mt @ 1.11% THM)
- The southern extent of the Lake MacLeod evaporite basin located on the additional tenements will be investigated for economic salt, gypsum and potash
- Desktop studies continuing on the Industrial Minerals Gascoyne Project to facilitate initial exploration work programmes

**Province Resources Ltd** (ASX: PRL) (**Province** or the **Company**) is pleased to announce that it has identified and recently applied for a further 864km² in the Gascoyne coastal region to add to the industrial minerals Gascoyne Project (**Gascoyne Project**) and the HyEnergy ZERO CARBON HYDROGEN™ Project (**HyEnergy Project**).

Managing Director, David Frances, commented "The identification of the additional 864km² of tenure complements both the Gascoyne industrial minerals project and HyEnergy green hydrogen project and importantly, gives us greater critical mass in the region. As we continue our desktop studies and progress the tenements to grant, I look forward to further outlining the Company's initial exploration work programmes."

The Gascoyne and HyEnergy ZERO CARBON HYDROGEN<sup>TM</sup> Projects are located in Western Australia's north-west and covers an area of 2,272 square kilometres. The town of Carnarvon is the administrative centre and adjoins the project area; it has first class infrastructure in place, including the Dampier Bunbury Natural Gas Pipeline (DBNGP) and the major North West Coastal Highway.

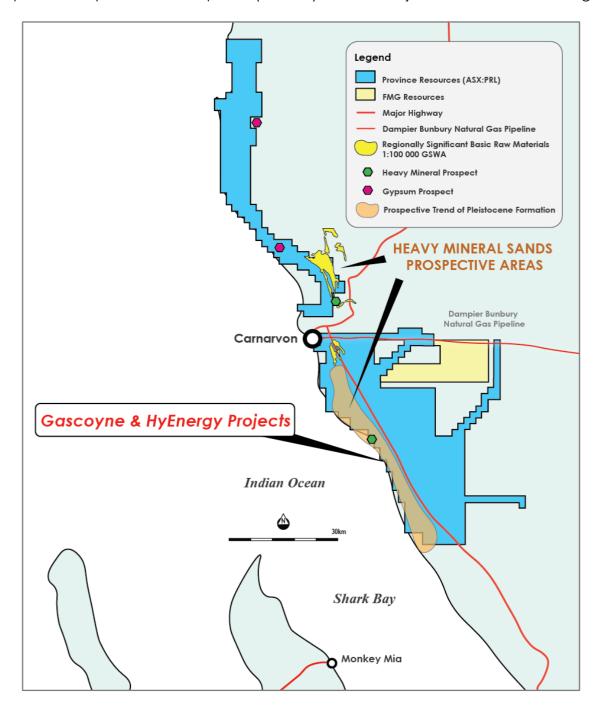


Figure 1. Location Map of the Gascoyne and HyEnergy Projects in the Gascoyne Region of Western Australia.

### Gascoyne Project - Mineral Sands

The Gascoyne Project coastal sand dune systems have the potential to replicate the Coburn Project further to the south at Shark Bay. The underexplored Pleistocene sand deposits in the project area underlie the inherent potential that remains untested.

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Some of the key highlights of the Gascoyne Mineral Sands Project are listed below;

- Approximately 40km of strike extent of the Pleistocene Brown Range dunal sand formation within the project area.
- Regional aircore drilling nearby has confirmed the presence of commercially important heavy minerals in the northern Gascoyne coastal region.
- High grade sample recording up to 7.2% HM (WAROX SITENO 237029) in near-coastal sand dune system outside of tenement boundary, highlights prospectivity of western portion of project area.
- Limited historic work completed in the project area testing inferred continuation of dunal formation.

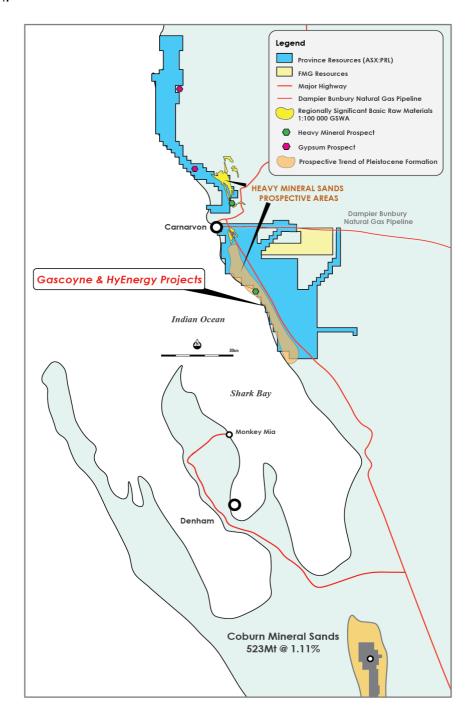


Figure 2. Location Map showing Province Resources tenements and Strandline Resources Coburn Deposit.

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## Capitalising on the Growing Mineral Sands Market

The Gascoyne Region boosts the world class Coburn mineral sands deposit with an Ore Reserve of 523Mt @ 1.11% Total Heavy Mineral (THM) and initial mine life of 22.5 years. Heavy minerals, such as zircon and titanium dioxide minerals (rutile and ilmenite) are deposited in the Pleistocene coastal sand dunal formations that extend intermittently along the Gascoyne coast. These heavy minerals are eroded from their parent igneous or metamorphic rocks and are transported by water and/or wind action over long periods of geological time, often ending up in the same locations as placer deposits. Most of the commercially attractive mineral sand deposits occur along old coastlines, particularly where high energy wave action and strong winds have prevailed over long periods of time.

Some of the key fundamentals of the heavy mineral sand market are listed below;

- Zircon and high-grade titanium feedstocks; producing products used in everyday life such as ceramic tiles, refractory, paint, titanium metal and welding rod applications.
- Zircon is resistant to water, chemicals, heat and abrasion, ~1.1 million tonnes per annum global market.
- TiO2 pigment imparts whiteness, is UV resistant and inert, ~7.0 million to a global market.
- Increasing demand driven by urbanisation, rising living standards, global growth and extensive array of applications.
- 'Critical Minerals', vital to the economic well-being of the world's major and emerging economies.
- Supply restricted by mine closures, declining grades and depleting stockpiles. China chloride pigment consumption increasing, driven by higher environmental standards and technology advancement.
- Strong long-term market fundamentals demand growth outpacing supply, new projects required to meet future demand
- Forecast structural supply gap, with demand for zircon increasing year on-year at 2.5-3.0% pa and existing production decreasing at average of 5% pa.

#### Gascoyne Project – Salt, Gypsum and Potash

Mining is an increasingly valuable industry sector for the Gascoyne region, contributing \$303.6 million to the gross regional product in 2018-19<sup>1</sup>. The industry primarily concentrates on salt production at Useless Loop in the Shire of Shark Bay and at Lake MacLeod near Cape Cuvier, north of Carnarvon. When operating at their current full capacity of 12 million tonnes per annum, these two operations account for ~65% of the state's total salt production. Due to an increase in the global price of salt and exchange rate differences in the global financial market, the mining sector in the Gascoyne has recently seen a significant increase in production and value over the past decade.

Some of the key fundamentals of the salt and potash market are listed below;

- >10,000 products derived from salt (PVC, alumina, glass, paper, water purification).
- Asian market size of ~160Mtpa salt (annual value of US\$6.5B).
- >50Mtpa additional salt demand over next decade<sup>2</sup> (growing population, requiring more industrial and consumer products).
- Potash is a premium fertiliser used on high value crops.

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- Potash global market size of ~7Mtpa (annual value of ~US\$3.5B).
- ~1Mtpa additional potash demand over next decade³ (growing population, changing dietary habits and declining arable land).

Some of the key highlights of the Gascoyne Salt, Gypsum and Potash Project are listed below;

- Gascoyne has an ideal climate to produce high purity salt.
- High temperature, high wind, low rainfall and low humidity.
- Extensive inter-tidal and alluvium areas, including the southern extent of the Lake MacLeod evaporite basin to be investigated.
- Proven salt producing region since the 1960's.
- Five large WA Solar Salt Operations (12-13Mtpa), controlled by Rio Tinto and Mitsui.

## The HyEnergy ZERO CARBON HYDROGEN™ Project

The HyEnergy ZERO CARBON HYDROGEN<sup>TM</sup> Project is in Western Australia's Gascoyne Region and covers a flat lying arid landscape with low intensity pastoral land use. With the Gascoyne's climate and wind patterns, renewable energy is an attractive and viable option<sup>4</sup>. This low competing land use and proximity to a large regional centre and associated infrastructure of Carnarvon, means the project area is ideal for installation of a commercial scale wind and/or solar farm. The hydrogen industry is in its infancy in Western Australia, but it is truly amazing how swift and significant the move into sustainable energy by both governments and corporations around the globe has been of late.

Green hydrogen produced from renewable sources, such as wind and solar energy, looks set to play a significant role in navigating society towards a decarbonised future and meeting the global aim of net zero emissions by 2050.

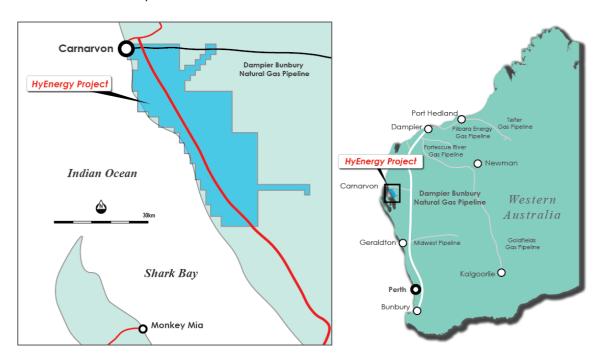


Figure 3. Location Map of the Gascoyne and HyEnergy Projects in the Gascoyne Region of Western Australia.

Some of the key fundamentals of the green hydrogen market are listed below:

- Western Australia's Hydrogen Strategy to support renewable hydrogen industry with a goal of 10% mix of renewable hydrogen in the DBNGP by 2030.
- Funding from Government on both a State and Federal level include:
  - o Western Australian Renewable Hydrogen Strategy \$10m.
  - Australian Renewable Energy Agency (ARENA) \$70m.
  - o Australian Government Advancing Hydrogen Fund \$300m.
- And globally:
  - o \$347b in ESG funds invested in 2020⁵.
  - \$490b govt and corporations selling ESG bonds⁵.
  - o Moody's expects 2021 sustainable debt issuance to reach \$650b and no signs of the ESG funds slowing⁵.
  - > 100 countries pledged to Net Zero by 2050<sup>6</sup>.
  - o Estimated that \$3 trillion or more in capital investment for decades will be needed.

Some of the key highlights of the HyEnergy Project are listed below:

- Infrastructure, existing Dampier Bunbury gas pipeline within close proximity to potentially instal spur line and provide Hydrogen Feedstock in DBNGP for domestic or export use.
- Infrastructure, room for offshore Ship Loading Facility in the future for export market.
- Wind, ranked 4th in Western Australia for mean wind speeds recorded per annum<sup>7</sup>.
- Wind, located along coastal region with the greatest wind potential.
- Solar, identified flat arid area with minimal competing land uses for large solar array network.
- Solar, Carnarvon has a very rich solar resource averaging 211 sunny days per year, with an average solar exposure of 22 MJ/m2 /day (or 6.24 kWh/m2 /day)<sup>8</sup>.
- Water, potential site to extract sea water for electrolyser plant.
- Supportive Government, The Regional Centres Development Plan (RCDP) is about attracting business, investment and people to support the growth of WA's Regional Centres and SuperTowns. This means a stronger economy and a better quality of life for the people in regional WA – and for the benefit of all Western Australians.



Figure 4. Location Map of HyEnergy Project highlighting highest suitability ranking by Geoscience Australia for prospective hydrogen production regions of Australia.

#### **Company Background**

As set out in the Company's ASX release dated 17 February 2021, the Company has entered into a conditional agreement to acquire all of the shares in Ozexco Pty Ltd. A shareholders' meeting will be held shortly to seek shareholder approval to complete this acquisition. The Company is an ASX listed natural resources company currently focused on the completion of the acquisition and progression of the HyEnergy ZERO CARBON HYDROGEN<sup>TM</sup> Project and the Gascoyne Industrial Minerals Project in the Gascoyne region of Western Australia. The Company also has some legacy mineral exploration projects with potential for copper, gold, nickel, cobalt, vanadium and other mineral opportunities that have a long mine life and play a critical role in the economic development of world economies. The Company's projects are located in Australia and Sweden.

-ENDS-

This announcement has been approved by the Board.

For more information contact:
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The information referred to in this announcement relates to the following sources:

- <sup>1</sup> Western Australia Minerals and Petroleum, Statistics Digest 2018-19
- <sup>2</sup> Roskill (November 2020)
- <sup>3</sup> Argus Consulting (November 2020)
- <sup>4</sup> Gascoyne Regional Development Plan 2010-2020 (February 2010)
- <sup>5</sup> Quinson, Tim. "The Boom in ESG Shows No Signs of Slowing." Bloomberg Green, 10 February 2021 www.bloomberg.com/news/articles/2021-02-10/the-490-billion-boom-in-esg-shows-no-signs-of-slowing-green-insight
- <sup>6</sup> Kelly, Jason. "Brookfield Pursues \$7.5 Billion Fund Devoted to 'Net-Zero' Shift" Bloomberg Green, 10 February 2021
- www.bloomberg.com/news/articles/2021-02-10/brookfield-pursues-7-5-billion-fund-devoted-to-net-zero-shift
- <sup>7</sup> Bonzle Digital Atlas of Australia
- <sup>8</sup> Carnarvon A Case Study of Increasing Levels of PV Penetration in an Isolated Electricity Supply System (April 2012)

# **Schedule of Tenements -** *Australia*

Name	Tenement	Ownership at beginning of quarter	Ownership at end of quarter
Pascalle	E 45/5316	100%	100%
Paterson South	E 45/5754	100%	100%
Paterson South	E 45/5755	100%	100%
Paterson South	E 45/5756	100%	100%
Gnama	E 63/1933	100%	100%
Gnama	E 63/1934	100%	100%
Gnama	E 63/1935	100%	100%
HyEnergy & Gascoyne Projects	E 09/2507	100%	100%
HyEnergy & Gascoyne Projects	E 09/2508	100%	100%
HyEnergy & Gascoyne Projects	E 09/2510	100%	100%
HyEnergy & Gascoyne Projects	E 09/2511	100%	100%
HyEnergy & Gascoyne Projects	E 09/2512	100%	100%
HyEnergy & Gascoyne Projects	E 09/2513	100%	100%
HyEnergy & Gascoyne Projects	E 09/2514	100%	100%

# **Schedule of Tenements** - *Ozexco Pty*

Subject to shareholder approval on the 22 April 2021 at the Company's General Meeting to approve the acquisition of Ozexco Pty.

Name	Tenement	Ownership at beginning of quarter	Ownership at end of quarter
HyEnergy & Gascoyne Projects	E 09/2486	0%	0%
HyEnergy & Gascoyne Projects	E 09/2487	0%	0%
HyEnergy & Gascoyne Projects	E 09/2488	0%	0%
HyEnergy & Gascoyne Projects	E 09/2489	0%	0%
HyEnergy & Gascoyne Projects	E 09/2490	0%	0%
HyEnergy & Gascoyne Projects	E 09/2491	0%	0%
HyEnergy & Gascoyne Projects	E 09/2492	0%	0%