



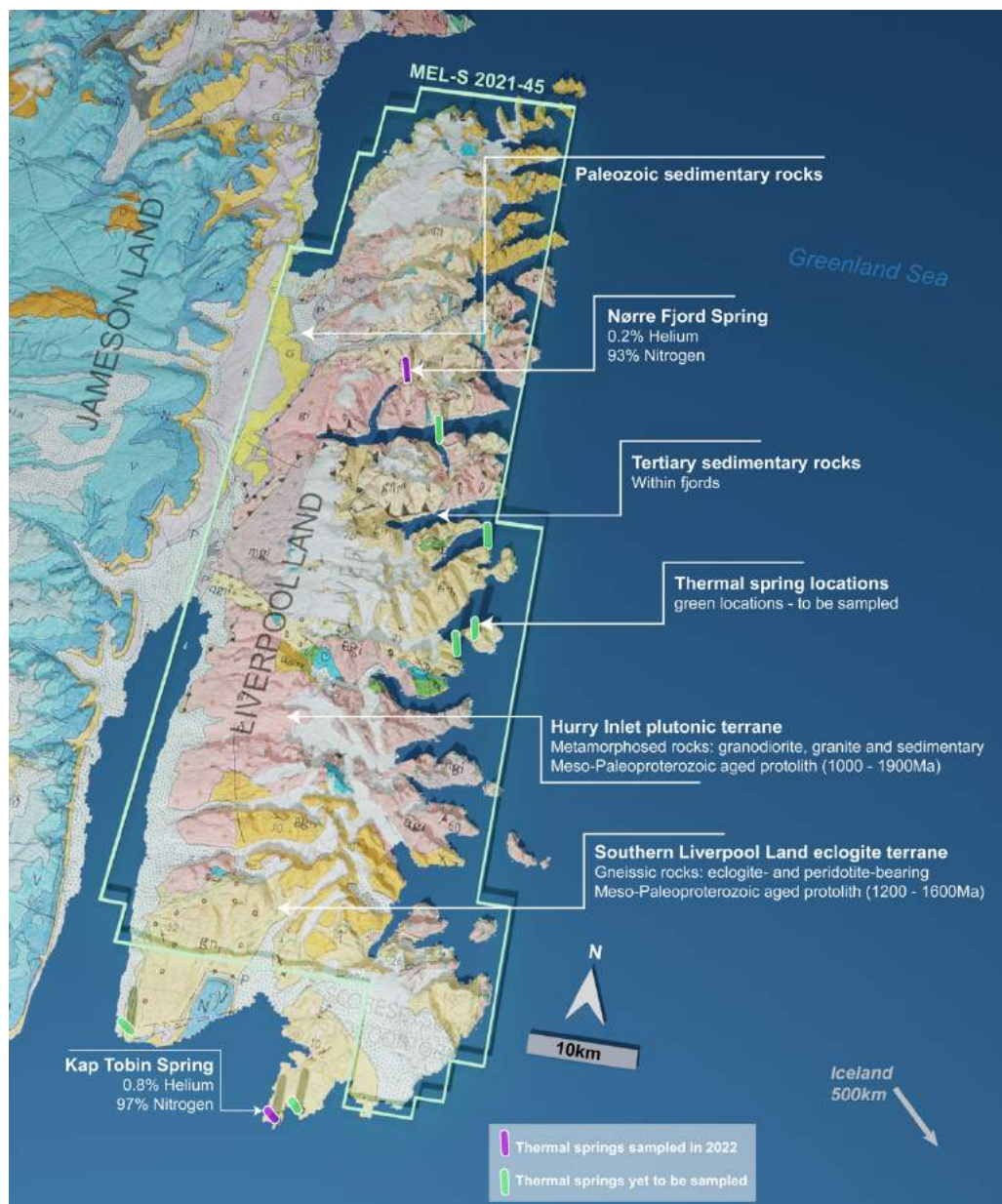
Tunu Project: Technical Brief

100% Pulsar Helium Inc.
Greenland

Tunu was identified by the team at Pulsar, and is one of very few primary helium discoveries

Location

The Tunu Project, covers the majority of Liverpool Land, East Greenland, spanning both the eastern coastal regions and the inland areas north of Kangertitivaq (also known as Scoresby Sund), the world's largest fjord system. The project area is not within the Northeast Greenland National Park, nor does it contain RAMSAR wetlands. Year-round access is possible via Nerlerit Inaat (CNP) airport located 5km to the west, and seasonal access by vessel. The settlement of Ittoqqortoormiit is located 5km to the south and is reachable from CNP via helicopter, boat, or snowmobile/dogsled. A military airstrip exists at Mestersvig, located 100km to the northwest, an area historically mined for lead and zinc and currently under renewed exploration. Project exploration is best facilitated by helicopters, with boats serving the coastal areas.



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Thermal Springs

In August of 2022, the Pulsar geochemistry team conducted a field expedition at the Tunu Project to collect geothermal spring gas samples, following up early reports (1926) of noble gas-rich thermal springs in the region. The team sampled the Kap Tobin and Nørre Fjord springs in the south and central regions of Liverpool Land respectively. The gas samples were analyzed at the labs at the Woods Hole Oceanographic Institution and the University of New Mexico. The Kap Tobin sample had the highest helium content of approximately 0.82%, whereas the Nørre Fjord samples revealed He contents of up to 0.19%. The bulk of the gas in each sample is nitrogen (93-97%) with minor argon and oxygen content. The high helium concentrations and helium isotope ($^3\text{He}/^4\text{He}$) ratios are consistent with radiogenic buildup in Proterozoic and Archean rocks, rich in U and Th, followed by release due to rifting and or interaction with a mantle plume.

Geology

The Tunu Project covers the bulk of the Liverpool Land Basement High (LLBH), which consists predominately of Proterozoic metamorphic and igneous rocks, including ultramafic rock. The LLBH is an outcropping basement high flanked by two sedimentary basins; the Jameson Land Basin to the west and the Liverpool Land Basin which lies offshore and to the east. Basement highs are large structural features, commonly buried in sedimentary basins, which are of interest for natural resource exploration because of their ability to influence migration and entrapment of economic energy or mineral-rich (or helium-rich) fluids. Fracture systems within the basement highs and areas of younger sediment onlap are key features for migration and potential trapping of gases.

The Tunu Project includes all the critical geological components for helium and hydrogen accumulation:

- Suitable source rocks in ancient, metamorphic and igneous basement;
- Mechanisms and pathways for the liberation and migration of gases;
- A mantle plume heat source to drive deep gas liberation and migration;
- Suitable geological conditions for reservoirs, traps and seals; and
- Thermal springs which are surface manifestations of liberated deep, helium-rich fluids from source rock parent minerals.

Geophysics

Pulsar has procured the past geophysical surveys conducted over the Tunu Project area. These include onshore seismic surveys by ARCO, involving 1,799 line km of surveying in Jameson Land from 1985 to 1989. This data, although only partially within the exploration license, is instrumental for understanding the area's stratigraphy, potential gas trap locations, and gas migration pathways. Additionally, Liverpool Land's western section had airborne geophysical surveys in 2013, including a gradient magnetic survey by Fugro and magnetic and TDEM surveys by SkyTEM, targeting red-bed copper mineralization by the Anglo American Exploration and Avannaa Resources Ltd joint venture.

Data in Pulsar's Possession

- 2D seismic (onshore and offshore, nearby coverage)
- Magnetic and TDEM (SkyTEM 2013, partial coverage)
- Gradient magnetics (Fugro 2013, partial coverage)
- Borehole logs and geochemical assays (8 hole program in 2013)
- Gas geochemistry (historic & 2022)
- Satellite multi-spectral interpretation (2022)

Licencing

Pulsar's wholly owned subsidiary, Skyfire Ltd., was awarded a Special Mineral Exploration Licence in 2021 (MEL-S 2021-45). This covers Liverpool Land and has an area of 2,772 km². It conveys the exclusive rights to all mineral resources, including hydrogen and helium, but not including hydrocarbons and radioactive elements.

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