

# Cape Bedford (Queensland)

## 贝德福德海角

### Overview

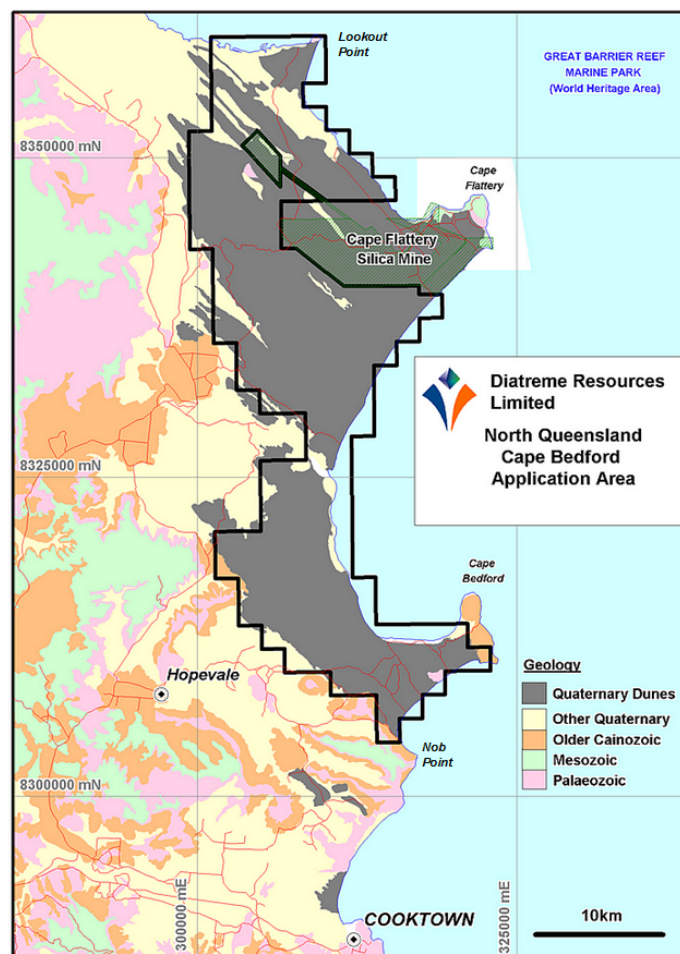
#### 概览

The Cape Bedford EPM application is located approximately 200km north of Cairns in North Queensland, and covers the extent of a large Quaternary sand dune field, part of which is currently being mined by Cape Flattery Silica Mines Pty Ltd (CFSM), a wholly owned subsidiary of Mitsubishi Corporation. Cape Flattery has operated since 1967 and is the world's largest silica sand mining operation.

贝德福德海角的勘探许可证申请位于北昆斯兰的凯恩斯市北部约 200 公里处，覆盖了一个大型的第四季沙丘源的范围，该区域的一部分目前正被弗拉德利海角石英开采有限公司（CFSM）开采。CFSM 是日本三菱集团的全资子公司。弗拉德利海角自从 1967 年开始作业，它是世界上最大的石英砂开采作业。

Negotiations have commenced with the traditional landowners to facilitate the grant of the EPM and develop an appropriate exploration program.

为了加快勘探许可证的授予并制定合适的勘探计划，本公司已经开始与传统的土地所有者进行谈判。



## Geology 地质概况

The Cape Flattery Cape Bedford dune field is approximately 55km long and 22km wide at its widest point, covering around 580km<sup>2</sup>. The Quaternary dunefield occupies a low coastal plain, with older sandstones of the Laura Basin and Hodgkinson Basin bounding its western edge and forming prominent outliers and headlands. The dune field consists predominantly of white, active, transgressive parabolic and elongate parabolic dunes, and rounded degraded dunes stabilised by vegetation, within a low lying (5 - 10m RL) interdune sandplain interspersed with dune lakes and swamps. The elongate parabolic dunes have a nose that may reach 90m high, with trailing ridges parallel to the prevailing southeasterly winds.

贝德福德海角的沙丘源长约 55 公里，最宽的地方为 22 公里，占地约为 580 平方公里。第四季沙丘源占据了较低的沿海平原，并与劳拉盆地的古老砂岩和霍奇金森盆地在其西部边缘接壤，形成明显的外露层和岬角。该沙丘源主要由白色的活跃的海浸抛物型沙丘、拉长抛物型沙丘以及被植被稳定的圆形退化沙丘组成，在一个低洼的（高于海平面 5-10 米）被沙丘湖泊和沼泽点缀的沙丘间沙原内。该拉长抛物型沙丘有一个高达 90 米的岬角，且尾随的山脊与盛行的东南风平行。

The dunes represent a source of high quality silica sand, as deep leaching of the sand masses has formed a podzolic soil profile with a near surface thick horizon of white silica sand up to 40m thick. The sand has been well sorted by aeolian processes and the grain size distribution is well suited to glass manufacture and foundry castings.

这些沙丘表现出高品质的石英砂源，由于深浸出沙块已经形成灰化土剖面（带有一层近地表的厚达 40 米的白石英砂）。这些砂由于风成过程被很好地分类，并且颗粒大小分布非常适合生产玻璃和铸造厂铸件。

The dunefield also represents a potential source of heavy mineral sands (zircon, rutile and ilmenite), as HM is both present within the parabolic dune sand mass in low concentrations, and has been concentrated on deflation / lag surfaces within the dune complex and by wave / water action on the current coastline (see photo below).

该沙丘源也表现出潜在重矿砂的来源（锆石、金红石和钛铁矿），由于重矿既以低浓度存在于抛物线形沙丘的沙块内，也集中于沙丘内的风蚀/残积表面以及通过浪/水的作用存在于当前的海岸线上（如下图所示）。

## Exploration 勘探

Most exploration has centred on the Cape Flattery area, within the Mining Leases of CFMS, but reconnaissance exploration has been carried out over the entire dunefield in the late 1960's and again in the early 1980's. This exploration confirmed the presence of both silica sand and heavy mineral sands, and Diatrema intends to build on the existing data and initially target those areas (e.g. Nob Point) where prospective silica sand dunes have been identified and access is readily available.

大部分勘探集中于福拉德利海角 CFMS 公司开采租约所属的地区，但是在 60 年代末和 80 年代初，侦察勘探已经在整个沙丘源上实施。这次勘探确定了石英砂和重矿砂的存在，本公司拟将以现有数据为基础，并首先把那些已被鉴定和评估为极易利用的石英砂沙丘地区作为勘探对象。

A program of geological / geomorphological mapping, drilling and sample assaying is anticipated to quickly generate silica sand resources. Bulk sample collection will allow process flowsheet development and product quality analysis, with scoping studies then undertaken.

本公司预期，一个包括地质/地貌描绘、钻井和样品测定的方案能够快速产生石英砂资源。大样搜集将允许流程工艺开发以及产品品质分析，然后进行范围界定研究。

Cape Bedford has the potential to be a high value project with a readily defined path to development.

通过简单明确的开发计划，贝德福德海角拥有成为高价值项目的潜力。

## Photographs



