



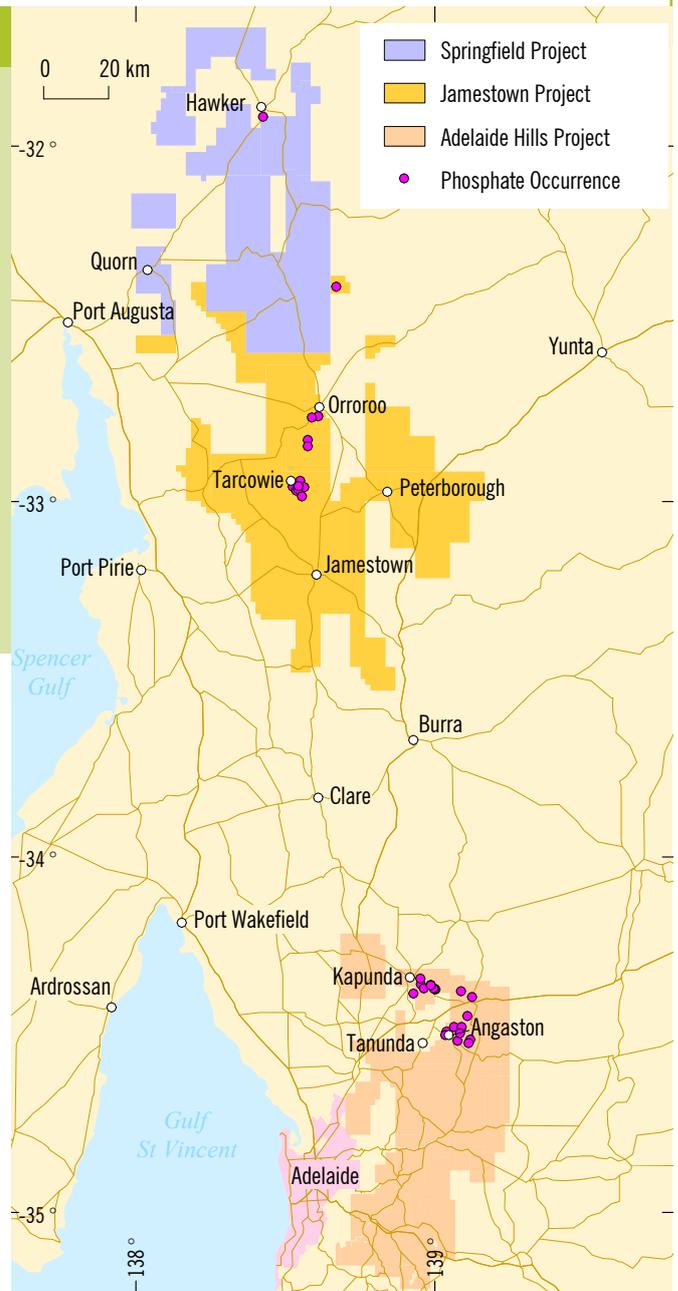
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Flinders Mines to evaluate phosphate potential of its Flinders Ranges and Adelaide Hills tenements

HIGHLIGHTS

- *Flinders Mines Limited (FMS) has decided to undertake an exploration program for phosphate in its Flinders Ranges and Adelaide Hills Projects in South Australia.*
- *Zones of interest up to 66 km long with large numbers of significant phosphate occurrences have been identified in the Orroroo and Kapunda – Angaston Areas.*
- *FMS will aim at locating a phosphate deposit of over 10 million tonnes by an exploration program consisting of soil sampling followed by drilling.*



Introduction

FMS has carried out an independent assessment of the phosphate potential of its Springfield, Jamestown and Adelaide Hills project tenements (Figure 1) by industrial minerals specialist Peter Johnson of Johnson Geological Services (JGS).

Flinders Mines has been exploring the tenements shown on Figure 1 for diamonds for some time, but has also retained 100% ownership of the industrial minerals rights.

Given recent market conditions for phosphate, FMS considers an exploration program over its tenure for phosphate is justified. FMS has concluded that a ready market exists for both phosphate rock and superphosphate in Australia and in particular South Australia.

Figure 1 Phosphate occurrences on Flinders Mines South Australian tenements.

Phosphate Occurrence in South Australia

Widespread marine sedimentary type phosphate occurrences within the Adelaide Geosyncline were documented more than 80 years ago. Total estimated South Australian historic production has been limited to about 500,000 tonnes. This is mainly due to the availability of cheaper sources of high-grade ore from the Oceania islands and more recently from the large Middle Cambrian phosphorites of the Georgina Basin in Queensland. Research to date indicates that no committed exploration for phosphate occurrence within Cambrian and Adelaidean sediments of the Adelaide Geosyncline has ever been undertaken.

Phosphate in Orroroo Area

(FMS 100%)

Investigations have highlighted the Tapley Hill Formation and Tarcowie Siltstone, particularly where they are in close proximity to the Brighton Limestone, as sedimentary horizons with significant potential for the development of phosphate.

Records indicate 13 occurrences of phosphate on FMS tenements in the Jamestown – Orroroo district (Figure 2). Small tonnages of phosphate rock have been produced from six of these occurrences. These occurrences are distributed over a N–S strike length of 66 km, with the majority contained within FMS' tenements.

A zone for immediate follow-up exploration has been identified where 12 of the 13 occurrences are concentrated over a 26 km strike length from just south of Tarcowie to Orroroo (Figure 2). The width of the prospective zone varies from 1–8 km within which the target horizons have been repeated by folding. This is all contained within FMS' 100% owned Jamestown Project tenement package.

Phosphate in Kapunda – Angaston area

(FMS 100%)

The recorded production and quality of phosphate from this region exceeds that of the Orroroo district.

Historical government records show 20 of 21 known occurrences of phosphate on EL 4131 have produced phosphate rock. Only Tom's Phosphate Mine (ML 4993, operated by Dudley Heintze) is currently producing phosphate rock at a rate of ~3,000 tpa. Many deposits have produced 20,000–30,000 tonnes of rock with 15–30% P₂O₅. The phosphate occurs as buff and brown clay and nodules within or adjoining lower Cambrian age Angaston Marble. It is commonly associated with oxides of iron and manganese.

RK Johns reported in 1976, that the Koonunga Phosphorite Member is stratigraphically below but in proximity to the Angaston Marble. Johns states that this phosphorite member is apparently lenticular. At St Johns Quarry, mapping and drilling has shown the deposit has a bedded character and the phosphatic breccias are of sedimentary origin. At the Moculta Quarry, the phosphate (with limonite nodules) occurs as a secondary deposit accumulated on an undulating karst surface, but with the source phosphate being the nearby Koonunga Phosphorite Member.

FMS has concluded that the Koonunga Phosphorite Member is of most interest as the primary source of phosphate in the Kapunda – Angaston area.

Tarcowie Phosphate Company Pty Ltd

By invitation, FMS personnel recently visited the phosphate mine owned by the Tarcowie Phosphate Company (TPC). TPC have assisted FMS in gathering exploration data for a small

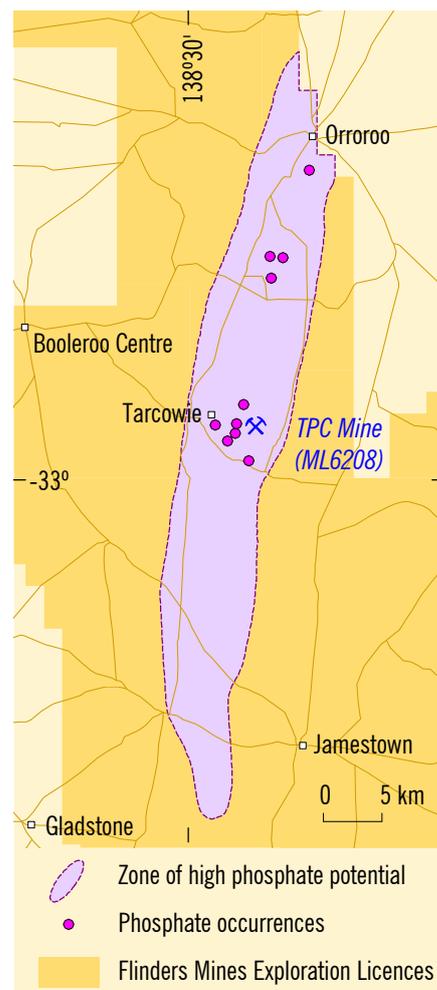


Figure 2 Zone of high phosphate potential.

area near the mine. They undertake a phosphate mining operation on mining lease ML 6208 which is contained within the identified 66 km strike length within FMS tenements shown in Figure 2. TPC produces a rock phosphate primarily for the South Australian agricultural market. The mining operations and phosphate ore are shown in Figures 3–5.

In a 2006 agreement, FMS granted TPC the right to obtain further mining leases over about 5 km within the 66 km identified prospective zone. If mining leases are obtained by TPC, future phosphate production will be subject to a royalty payment to FMS.



Figure 3 Phosphate treatment plant (ML6208, Tarcowie Phosphate Company).



Figure 4 Phosphorous mineralisation in pit (ML6208, Tarcowie Phosphate Company).

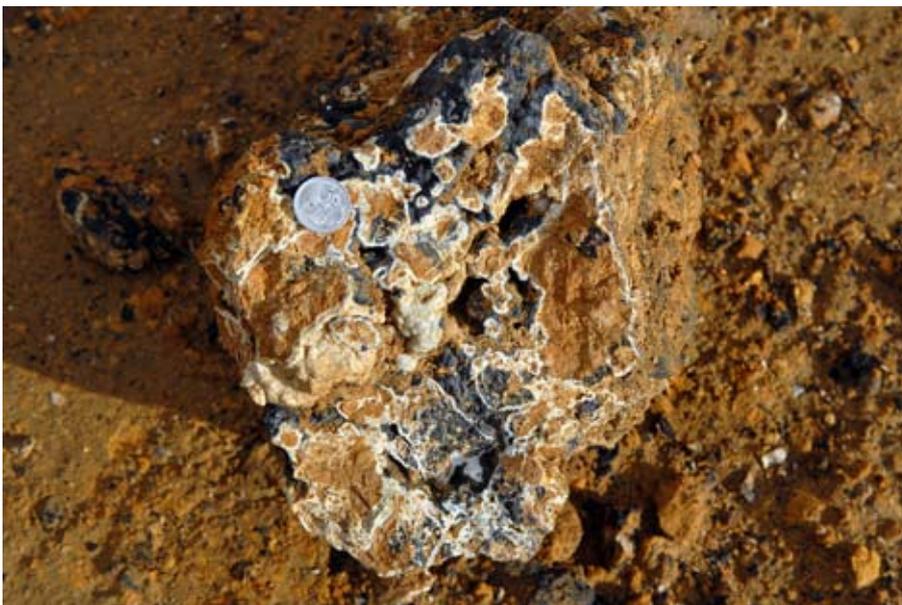


Figure 5 Phosphate ore (ML6208, Tarcowie Phosphate Company). Phosphate-bearing minerals are white, black minerals are manganese oxide.

Future Investigations

It is anticipated that FMS will soon commence exploration within the 66 km strike length zone initially undertaking soil sampling to define phosphate concentrations with follow-up drilling to test the best anomalies generated.

This exploration would be aimed at locating a phosphate deposit of the order of 10 million tonnes which is deemed of the size required to support a significant phosphate mining operation with guaranteed on-going supplies to the SA and Australian market.

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The information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by Dr K Wills who is a Fellow of the Australasian Institute of Mining and Metallurgy. Dr Wills is an employee of Flinders Mines Limited. He has more than five years relevant experience in the style of mineralisation and types of deposit under consideration and consents to inclusion of the information in this report in the form and context in which it appears. He qualifies as a Competent Person as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves".