## **Title Page**

Title Holder	South Boulder Mines
Project Operator	South Boulder Mines
Tenement	EL 26761
Project Name	Georgina Basin Phosphate Project
Report title	Final Surrender Report on EL 26761 For the period ending 21/9/2009
Author	P.Staples
Company	South Boulder Mines
Target Commodity	Phosphate
Date of Report	February 2011
Datum	GDA94/zone 52
Datum 250,000 mapsheets	GDA94/zone 52 Avon Downs SF 5304 Frew River SF 5303
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## **Summary**

Exploration Licence EL 26761 was granted to South Boulder Mines on the 22/9/2008. The licence is 445 blocks, of 1341.73 sq. kms. located approximately 250 kms. ESE of Tennant Creek and 20 kms south of the Barkly Highway and the Wonarah Phosphate deposit. South Boulder mines surrendered this tenement on 21/9/2009.

The tenement is located in the Barkly Land System, an area which has little topographic relief with poorly defined drainage and with vegetation dominated by low open woodland with (soft spinifex) hummock grassland understory. The climate is semi-arid with annual monsoonal rain, though it is in a region which may be subject to tropical cyclones.

The licence is situated in the central western Georgina Basin, toward the western edge and immediately above the Proterozoic basement and the Early Cambrian Peaker Piker Volcanics. The overlying Middle Cambrian phosphoritic sediments contain Australia's largest phosphate deposits. These deposits include the Phosphate Hill deposit (1400Mt @  $17.5\% P_2O_5$ ), the Wonarah (330Mt @  $18.9\% P_2O_5$ ), Arruwurra (131Mt @  $18.6\% P_2O_5$ ), the Highland Plains (56Mt @  $16\% P_2O_5$ ), Alexandria (15Mt @  $10\% P_2O_5$ ), Alroy (5Mt @  $20\% P_2O_5$ ) and Buchannan Dam (8Mt @  $20\% P_2O_5$ ) deposits.

The exploration targets are the Middle Cambrian phosphatic sediments and phosphorites in the Wonarah Beds and the Gum Ridge Formation occupying basement depressions.

Exploration Licence EL 26761 overlaps in part with the previous EL 22594 held by Rio Tinto. The reported activity was reconnaissance geological assessment and rock chip sampling. The results of this work concluded that potentially phosphatic units outcrop in EL 22596, (north of EL 26761) and these units trend to evaporitic basin margin facies (considered to be less prospective) in EL 22594 in the south. Tenement EL 26761 occupies the region in between and has no reported outcrop of phosphatic units. No subsurface investigations have been reported.

No further exploration activities have been carried out by South Boulder Mines and the tenement has been relinquished.