

PHOSPHATE AUSTRALIA LIMITED

ABN 51 129 158 550



Annual and Final Report

EL28152

01/03/2011 – 08/01/2016

Report Prepared By:

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1.0 INTRODUCTION

EL28152 was located on the northern margin of the Barkly Tablelands, on the Mount Drummond 1:250,000 map sheet (SE5312). The area experiences a sub-tropical climate with the wet season occurring from November to April every year. During this time the area can be difficult to traverse by vehicle as access roads may be flooded. In the dry season the area is accessible by 4WD vehicle via pastoral tracks.

Phosphate Australia Limited acquired the tenement by application on 11 March 2011 due to the presence of historical iron occurrences in the region and perceived favourable local geology.

EL28152 formed part of part of the Company's Highland Plains group geological report GR-096/09.

Permit	Original Area km ²	Application Date	Grant Date	Surrender Date	Comments
EL28152	21.0	08 June 2010	1 Mar 2011	08 Jan 2016	100% Phosphate Australia

1.1 LOCATION & ACCESS

EL28152 is situated around 410 kilometres from Mt Isa in Queensland. Access to the tenement is along the Barkly Highway to Camooweal, and thence via the unsealed gazetted Rocklands Road and station tracks heading north along the Northern Territory Border.

1.2 TOPOGRAPHY

The topography of the Highland Plains area consists of hummocky hills in the west, which defines the Western Mine Target Zone ("WMTZ"). Here phosphatic siltstone is just below the soil horizon. Heading east from the WMTZ, the central area becomes more subdued, typical of an alluvial washout zone or alluvial fan which has eroded the tops of the hills. As the phosphatic zones dip to the east, weathering has not eroded the ore and it is intersected at depths from 15 metres. The topography over the ore zone to the east is also fairly flat, however the topography over the ore zone

to the north and south in these areas consists of prominent hills which separate the Cambrian sequences from the lower lying Proterozoic sequence shales.

In the distance and partly off the tenement, a cliff formation of Proterozoic Sequences bounds the ore zone to the north and west. In the south, a quartzitic promontory has defined the southern part of the zone. These cliffs make up a C-shaped embayment where the sea level once transgressed, providing a trapping environment and quiet conditions with upwelling cold waters suitable for phosphorite deposition.



Figure 1 - EL28152 location

2.0 GEOLOGY

2.1 REGIONAL GEOLOGY

Highland Plains falls within the Palaeozoic Georgina Basin, an intracratonic sedimentary basin comprised of shallow marine successions up to 450m thick. Typically the successions consist of carbonate and marine clastic rocks, evaporites, fluvial and lacustrine continental sandstones, glaciogenic sediments, shale and siltstone overlain by marine carbonates and clastic rocks of Cambrian to Ordovician age (McCrow, 2008). In parts this is overlain by Silurian to Early Carboniferous terrestrial sediments.

Within the central region, the Platform has been subdivided into an eastern Undilla Sub-basin and a western Barkly Sub-basin, separated by the Alexandria-Wonarah Basement High.

During the early middle Cambrian, a sea level transgression inundated the central Basin depositing sediments within a tectonically quiescent platform. By the middle Cambrian phosphogenesis became widespread as a result of cold water upwelling from deeper marine conditions. Numerous phosphate deposits occur within the Georgina Basin, deposited in restricted marine embayments. These embayments form the basement topography which controlled the phosphorite deposition. Black soil horizons – a weathering product of the dolostones and limestones - have subsequently covered the topography, leaving flat and featureless terrain in parts.

The embayment was bound by land to the North, South and West and had restricted flow out of the Burke River Outlier to the east (McCrow, 2008).

Today the basin is surrounded by the Nicholson and MacArthur Sub-Basins in the North, the Tennant Inlier to the West and the Arunta Province to the South.

Facies changes within the successions make stratigraphic associations between different parts of the Basin difficult.

2.2 LOCAL GEOLOGY

The Highland Plains Phosphate Project consists of siltstones, cherty siltstones, sandy siltstones and ferruginous sandy siltstones overlying banded, alternating dark

and creamy claystones that show distinctive leisengang textures and form the basal unit of the economic phosphate horizon. These units are of Cambrian age and belong to the Lower Border Waterhole Formation.

In the Western area, phosphatic siltstones may be found near surface just below the soil horizon, typically associated with manganese, which either appears as a pressure intergrowth or in dendritic growth patterns.

The phosphate occurs in two horizons now defined as the upper and lower zones of the Western Mine Target Zone (“WMTZ”).

In the Central area the topography is mainly flat, compared to the hummocky hills in the west. This central area consists of outcropping barren white siltstones, reddish white sandy siltstones and remnants of black soils eroded from the dolostones/limestones. These overlie phosphatic siltstones and cherty phosphatic siltstones which occur at depth.

To the east the area continues to be flat, but the ore zone is bound by hummocky hills to the north and south, similar to those in the WMTZ.

A conglomerate marker horizon may be intersected in the western edges of the Central Zone, consisting of well-rounded pebbly clasts ranging from millimetres to several centimetres in size.

A large slump block occurring in the Central Zone suggests an alluvial fan grew after the sea level regressed, and was supplied from the Proterozoic cliffs to the North. These cliffs are part of the Bluff Range Formation.

The phosphatic siltstone horizons dip generally to the east at roughly 30°. Variable dips suggest structural activity such as faulting and possibly gentle folding at oblique angles. A graben structure may also have caused the Central Zone structure.

The Lancewood Creek follows a fault line bounding the deposit to the south. This normal fault has dropped the southern block and has subsequently become infilled by dolostones and dolomites of the Camooweal Formation. The younger Bush Limestone conformably overlies the sequence closer to the fault.

Siltstone sequences may in parts underlie this Formation at depth, however drilling to date to the south of the fault has not confirmed this theory and the dolomites may occur to around 100 metre depths.

Barren siltstone sequences and limestone occur to the south of the ore zone. This possibly ties in with the barren siltstones in the central part of the ore zone which could represent another, later, sea level transgression. The conglomerate may represent this sea level stand in the middle of the sequence.

The above allows the phosphate depositional environment to be reconstructed. Proterozoic metasedimentary cliffs to the north and west formed a quiet marine embayment and thus a trapping environment as the sea transgressed to the northwest. This warm embayment had upwelling cold water from the deep ocean creating the right temperature, pH and Eh conditions for phosphorite precipitation.

In the southwest, a quartzitic horizon, probably once a sandbar, controlled sedimentation to an eddy environment within the C-shaped embayment, effectively depositing the phosphorite in northwest-southeast bands.

The phosphorite occurrences at Alexandria, Buchanan Dam and Alroy probably formed under similar conditions as Highland Plains, but are now geomorphologically very different.

The Proterozoic embayment is now a basement feature and the siltstone sequences are covered over by the Camooweal Dolostones which have weathered to flat, barren, black soils plains.

3. WORK CARRIED OUT ON EL28152

EL28152 was field checked in July 2011 and first-pass reconnaissance mapping carried out, which identified outcropping Plain Creek and Brumby Formation. No samples were collected. This was reported in the 2012 Annual Report.

In 2013 the Company entered into a Joint Venture Option Agreement with Jimpec Resources, covering the Manganese and Iron rights for tenements including EL28152. Immediately after the JVOA was signed Jimpec commissioned an iron mineralisation assessment for the Nicholson/Highland Plains tenements. The report

identified areas of potential iron mineralisation and investigated their possible iron endowment. Targets BC8b and BC8c overlap in part onto EL28152.

The tenements were managed by Jimpec in 2014-2015. During this time Jimpec concentrated on introducing investors to the iron potential of the tenements, including leading a field trip to the Sticky Fly and Fearless Fly prospects. No on-ground exploration was conducted on EL28152.

\$16,476 was spent on activities in EL28152 in the final reporting period.

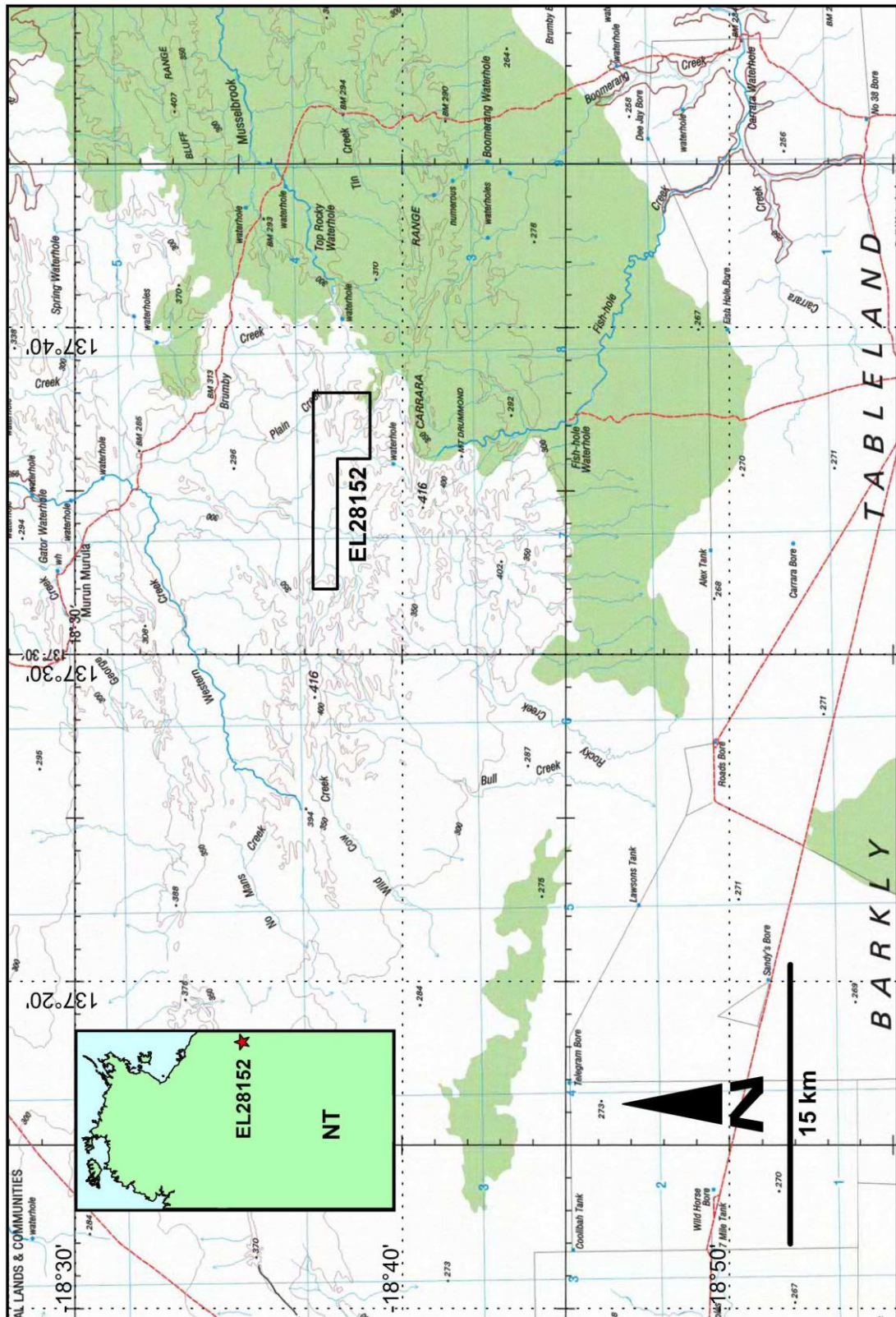


Figure 2: EL28152 tenement location plan with original tenement outline.