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EL 2459 MOUNT BRITTON

PARTIAL SURRENDER REPORT FOR THE PERIOD ENDING 18/11/98

Submitted by

Caldera Resources NL
1999

PRIMARY INDUSTRIES AND RESOURCES SA

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ENVELOPE 9466

TENEMENT: EL 2459, Mount Britton area

TENEMENT HOLDER: Caldera Resources NL

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REPORT:	**Caldera Resources NL, 1999.** Partial surrender report. EL 2459, Mount Britton (January 1999).	**9466 R 1** Pgs 3-11

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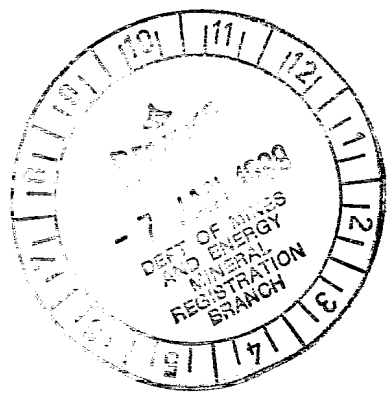
CALDERA RESOURCES NL

PARTIAL SURRENDER REPORT
EXPLORATION LICENCE 2459
MOUNT BRITTON
JANUARY 1999



PARTIAL SURRENDER REPORT MOUNT BRITTON EL 2459

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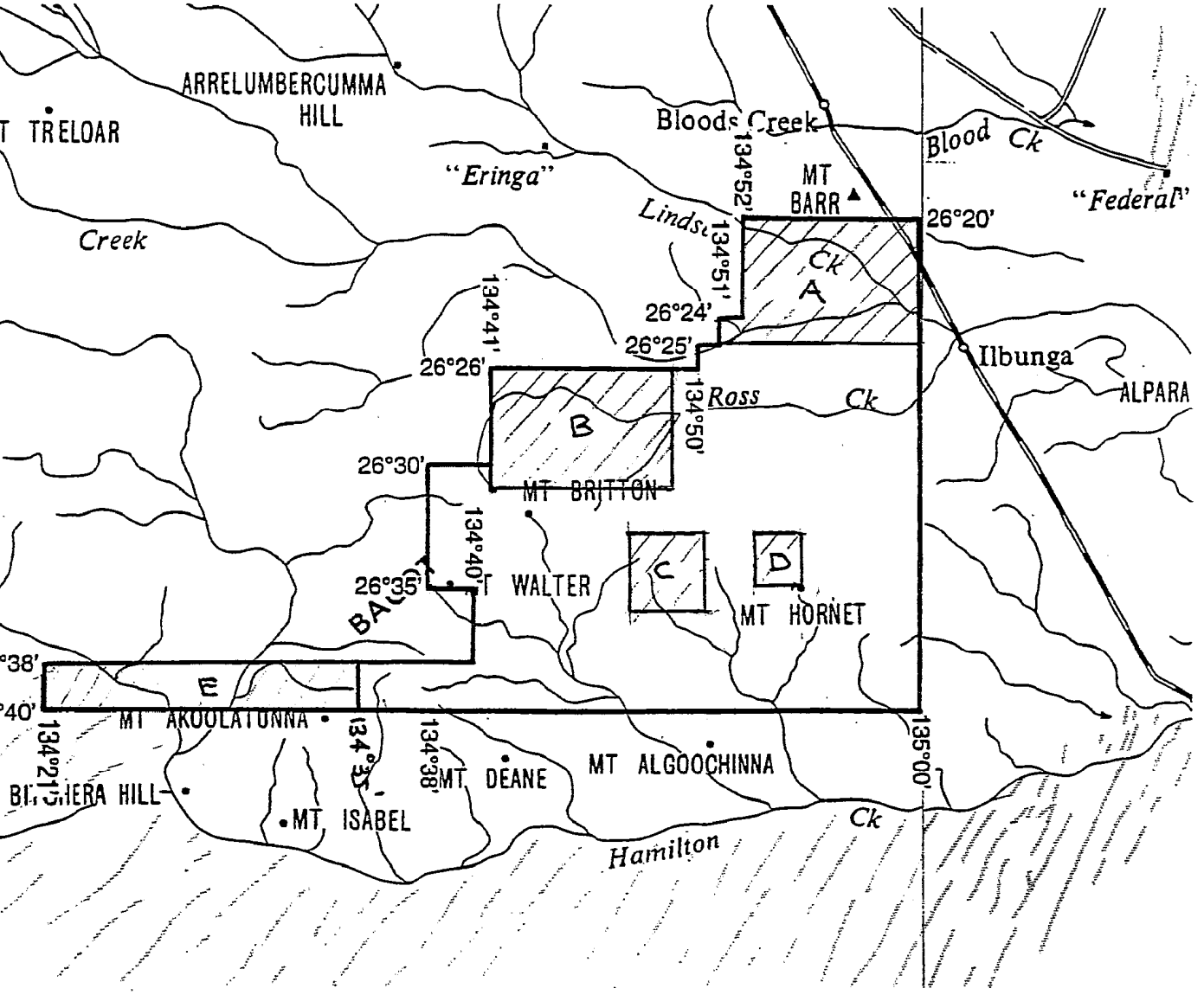
INTRODUCTION

Exploration Licence 2459 is located in the central portion of the Abminga 1:250,000 sheet in the far north of South Australia. It is 1165 square kilometres in area and was granted to Caldera Resources N.L. on the 19th November 1997.

Following a review of the aeromagnetic data and results from drilling of two stratigraphic drill holes elsewhere on the Licence, areas with E 2459 where selected for surrender. The areas nominated for retention are as follows;

Area "A"	134°52'	26°20'
	135°00'	26°20'
	135°00'	26°25'
	134°51'	26°25'
	134°51'	26°24'
	134°52'	26°24'
Area "B"	134°41'	26°26'
	134°49'	26°26'
	134°49'	26°31'
	134°41'	26°31'
Area "C"	134°47'	26°33'
	134°50'	26°33'
	134°50'	26°36'
	134°47'	26°36'
Area "D"	134° 52'	26°33'
	134°54'	26°33'
	134°54'	26°35'
	134°52'	26°35'
Area "E"	134°21'	26°38'
	134°35'	26°38'
	134°35'	26°40'
	134°21'	26°40'

SCHEDULE A



SCALE 1 : 500 000

10 0 10 20 30 40 50

KILOMETRES

NOTE: There is no warranty that the boundary of this Exploration Licence is correct in relation to the other features on the map. The boundary is to be ascertained by reference to the Australian Geodetic Datum.

LOCATION AND ACCESS

Exploration Licence 2459 is located in the south-central portion of the Abminga 1:250,000 sheet. Access is rather poor from various station tracks, a seismic line and by tracks along fence lines. Relief is mild and the country is lightly vegetated so that across country access in a 4-wheel drive vehicle is generally possible although it can be quite slow due to the rough nature of the surface.

Much of the area is formed by the heavily dissected Bagot Range that rises above the peneplained surrounding country by a maximum of 50 metres. the central part of the Licence contains a watershed between the tributaries of Stevenson Creek to the north and Hamilton Creek to the south. The extreme western part of the Licence if covered by northeast trending sand dunes forming the Pedirka Desert to the south.

GEOLOGY

Regionally the Licence is situated just to the east along trend from the Moorilyanna Graben, which sits between the Musgrave Block and the Bitchera Ridge. South of the Musgrave Block, the De Rose tectonic lineament separates the Musgrave-Mann Metamorphics from Late Proterozoic sediments that form the Moorilyanna Graben and Bitchera Ridge. The Bitchera Ridge is a structural high comprising clastic sediments ranging from tillite to siltstone with minor dolomite and calcareous sandstone. These lithologies persist southward into the Wintinna map sheet where they form the northernmost extension of the Gawler Craton.

Further to the east, on the Oodnadatta map sheet, fault-bounded blocks of Proterozoic schists and gneiss protrude through the Phanerozoic sediment cover at Algebuckina and Mt. Dutton to form the Peake and Denison Inliers.

On the Abminga map sheet the Mesozoic Pedirka Basin comprises generally flat-lying sediments with a total thickness of about 500 metres. A thin cover of Pedirka Basin sediments onlaps the eastern margin of the Musgrave Block. The sediments of the Pedirka Basin that outcrop include claystones and arenites of the Winton and Oodnadatta Formations overlying dark silty claystones, carbonaceous and pyritic shales and quartz sandstones of the Bulldog Shale.

The base of the Mesozoic section is the Jurassic Algebuckina Sandstone; a poorly consolidated quartz sandstone with coal seams at the base. This is a freshwater unit that preceded deposition of marine sediments during a marine transgression. The Mesozoic-Palaeozoic boundary throughout the basin is marked by an unconformity that has no surface expression on these map sheets. On the western margin, the Algebuckina Sandstone outcrops against Musgrave Block where it rests unconformably on a deeply weathered and kaolinised crystalline basement.

The underlying Palaeozoic Warburton Basins includes formations ranging in age from Permian to Cambrian(?) that overlie a Proterozoic crystalline gneiss basement. The Basin extends from the Abminga map sheet and across the Dalhousie map sheet where seismic data and drilling shows it attains a maximum thickness of about 3 000 metres. The Basin is structurally simple with broad, shallow folds and few near-vertical normal faults.

Much of the Mesozoic section throughout the Licence area is covered by a sequence of flat-lying Cainozoic sediments. The Cainozoic cover is dissected in the Bagot Range so that the Mesozoic Bulldog shale is exposed or covered only by a thin veneer of unconsolidated Quaternary sediment. Tertiary Cordillo Silcrete was extensively developed across the much of the region. It is has been largely removed by erosion in many areas but its extensive presence as boulders strewn across the landscape indicates its former extent. Cordillo Silcrete forms the edge of escarpments that mark the boundary of the Bagot Ranges.

Partly silicified clastics and carbonates forming the Mount Willoughby Limestone outcrop in the northern part of the Licence on the margins of Stevenson Creek. The unit can be divided into two sections; an upper chalcedonic limestone and a lower clastic sequence. The chalcedonic limestone unit is best developed in an area on the extreme eastern boundary of the Licence area where it is exposed only in areas low in the landscape.

The limestones are thought to represent remnants of a palaeo-drainage system in which the limestones were deposited in valley lakes and swamps. The lower clastic sequence, without the limestone capping, is more widespread. These two units form palaeo-drainage systems that date from about the Miocene and drained in an easterly to southeasterly direction, extending as far west as the Musgrave Block.

A small area in the extreme western part of the Licence is covered by late Pleistocene red-brown sands that form extensive linear dune systems. The sands form part of the Pedirka Desert. Hamilton Creek

forms the northern boundary of the Pedirka Desert between the linear sand dunes to the south and the elevated topography of the Bagot range.

AEROMAGNETIC DATA

The aeromagnetic data was acquired from MESA. The survey was flown as part of the South Australian Exploration Initiative. The data were acquired on north-south lines spaced a nominal 400 metres apart with a mean terrain clearance of 80 metres. Detailed specifications for this survey have been published by MESA.

The aeromagnetic data over EL 2459 is generally magnetically quiet. A few broad low-amplitude highs are present and these are considered to be due to either magnetic bodies in the basement and/or up-faulted blocks of basement at depth. No interpretation or analysis of these deep features was been attempted. The main interpretative activity completed was searching the data in various presentation formats looking for isolated dipolar features that have similarities to those features known to occur over kimberlitic diatremes. Several anomalies of this type are known to occur to the north of EL 2459 in the central Abminga area.

The desired features are characterised by isolated, low-amplitude, dipolar anomalies of short strike length. Selected anomalies were priority ranked according to the degree of certainty of identification. Rank 1 anomalies exhibit the magnetic character sought i.e. isolation, short strike length, dipolar form and small amplitude indicative of a shallow source. Rank 2 anomalies also show many of these characteristics but the identification is less certain due to interference from other features or other factors. Images of the

radiometric data were also used to identify and rank possible targets.

No aeromagnetic targets in either category were recognised within the areas nominated for surrender.