Natural Resources Exploration Pty Ltd

Exploration Licence 2JÏ FÌ (Pedirka Basin Project)

Annual and Final Report

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Author

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## 1.0 SUMMARY

Exploration Licence (EL) 29718 was granted to Natural Resources Exploration Pty (NRE) on the 31 October 2012 for a period of six years. The first relinquishment of 125 blocks (50% of total) is due after the second year of tenure, however NRE have elected to do a full relinquishment of all subblocks at this time. This decision is based on a desktop review completed in the first tenure year indicating the tenement to have limited potential.

## 2.0 INTRODUCTION

Natural Resources Exploration Pty Ltd was granted the Exploration Licence (EL) 29718 on the 31 October 2012 for a period of six years. The tenement has a total of 250 sub-blocks (Table 1) covering 775.80 km<sup>2</sup>.

Table 1 - Blocks and sub-blocks of EL 29718

Map Sheet 1:1,000,000	Block ID	Sub-Blocks	Number	
SG53	1317	W, x,y, z	4 Sub-	
			Blocks	
SG53	1318	W, x, y, z	4 Sub-	
3033			Blocks	
SG53	1319	Q, r, s, t, u, v, w, x, y, z	10 Sub-	
3033			Blocks	
SG53	1320	Q, r, s, t, u, v, w, x, y, z,	10 Sub-	
3033	1320		Blocks	
SG53	1321	0 a r c + 11 v w v v z	11 Sub-	
3033	1321	Q, q, r, s, t, u, v, w, x, y, z	Blocks	
SG53	1389	B, c, d, e, g, h, j, k, m, n, o, p, r, s, t, u, w, x,	20 Sub-	
3033	1309	у, z	Blocks	
SG53	1390	y, z A, b, c, d, e, f, g, h, j, k, l, m, n, o, p, q, r, s,	25 Sub-	
3033	1390	t, u, v, w, x, y, z	Blocks	
SG53	1391	t, u, v, w, x, y, z A, b, c, d, e, f, g, h, j, k, l, m, n, o, p, q, r, s,	25 Sub-	
3033		t, u, v, w, x, y, z	Blocks	
SG53	1392	1202	A, b, c, d, e, f, g, h, j, k, l, m, n, o, p, q, r, s,	25 Sub-
3033		t, u, v, w, x, y, z	Blocks	
SG53	1393	t, u, v, w, x, y, z A, b, c, d, e, f, g, h, j, k, l, m, n, o, p, q, r, s,	25 Sub-	
3033		t, u, v, w, x, y, z	Blocks	
SG53	1461	B, c, d, e, h, j, k	7 Sub-	
3033			Blocks	
SG53	1462	A, b, c, d, e, f, g, h, j, k	10 Sub-	
			Blocks	
SG53	1463	A, b, c, d, e, f, g, h, j, k, n, o, p	13 Sub-	
			Blocks	
SG53	1464	A, b, c, d, e, f, g, h, j, k, l, m, n, o, p	15 Sub-	
<b>SG53</b>			Blocks	
SCES	1465	A, b, c, d, e, f, g, h, j, k, l, m, n, o, p	15 Sub-	
SG53			Blocks	
SG53	1466	A, b, c, d, e, f, g, h, j, k, l, m, n, o, p	15 Sub-	
3033			Blocks	

SG53	1467	A, b, c, d, e, f, g, h, j, k, l, m, n, o, p	15 Sub- Blocks
TOTAL			250

## 2.1 Location and Access

EL 29718 is approximately 65 West of Finke (Figure 1).

The Pedirka Basin project is located in the southern part of the Northern Territory, south of Santa Teresa and West of Finke.

Pedirka Basin is located in central Australia, straddling the borders of the Northern Territory and South Australia.

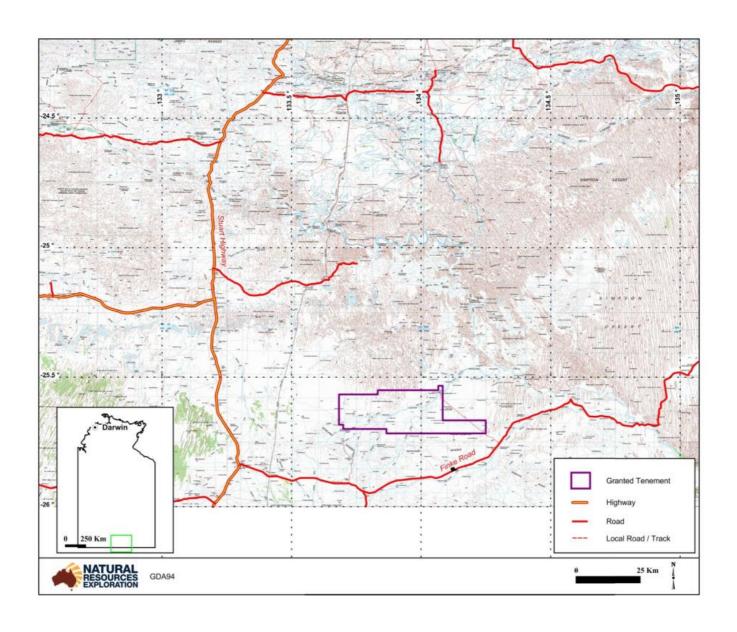


Figure 1 – Location of EL 29718

### 3.0 TARGET COMMODITY

The focus of Natural Resources Exploration's exploration activities is for a variety of minerals including base metals, gold, phosphate and diamonds.

## 4.0 BLOCKS RELINQUISHED

All sub-blocks from EL 29718 are to be relinquished.

## 5.0 WORK CONDUCTED ON RELINQUISHED GROUND

## **5.1 Previous Exploration**

To delineate prospective areas for coal, base metal and uranium mineralisation and define the next phase of exploration, Natural Resources Exploration ('NRE') has carried out extensive office-based studies of EL29718 and a historic review of previous exploration over the tenure area. Prior to grant, NRE also attended the Alice Springs Core Library for the purpose of conducting XRF and ALS Analysis of cuttings from previously drilled water bores in the region.

Our office-based studies and analysis of cuttings at the Alice Springs Core Library have allowed us to delineate prospective areas for base metal and uranium mineralization and in particular, gold mineralisation.

#### 5.2 Exploration Studies

NRE has conducted an extensive review of historic exploration over its Lilla Creek South Prospect. A review of all previous exploration within the EL has been completed including:

- Review of previous exploration data from NTGS open file company reports; and
- Review of aeromagnetics, of radiometrics and gravity survey provided by NTGS; and
- Review of satellite imagery, of ASTER imagery, Google Earth Imagery.

Exploration focus during the first term within EL29718 has primarily been for sedimentary U and gold mineralization deposits. Fourteen companies have explored the area from 1984 to present with aerial radiometrics being a common tool used to define exploration targets which were generally followed up with geological reconnaissance.

In the wider area, there has been exploration for sedimentary and primary U, Au, opal, diamonds, base metals, Sn, Ta, PGE, REE, massive Mn, Ni, Fe and coal.

## **Afmeco Mining and Exploration**

Afmeco Mining and Exploration held three tenements, EL820, EL909 and EL2398. These tenures were explored by Afmeco Mining and Exploration between 1973 and 1981 by

radiometric surveys. Follow up drilling was planned but only two holes drilled due to government action on uranium exploration at this time.

### Burke, RJ

EL5602 was explored for Au, opal and diamonds by Burke, RJ from 1988 to 1990 via geological reconnaissance, rockchip sampling (not assayed, petrography) and pan concentrate. Two potch opal (low quality jewellery opal) areas were located. In the authors opinion there is a high potential for more potch opal areas with a strong possibility of precious opal (high quality), based on an air photo interpretation. Tin biotite, amphibole and zirconium were observed in the pan concentrate.

# Benger, JW

EL5862 was explored for Au and opal by Benger, JW from 1988 to 1990. Whole rock sampling was performed with the geochemistry of samples being compared to samples collected from the Mintabie Opal Fields (an opal field in South Australia approx 200km south west of Pedirka). This showed similar and identical results. One sample from an amphibolite dyke near Umbeara Well gave anomalous gold values 0.03ppm (the rough location of this sample has been guessed at based on the NTGS mapping of dykes in that area). 12 auger holes were drilled out of a planned 120. The holes indicated that any potential opal bearing strata had been eroded away and any potential must be found in the south-east corner of the EL. This was not covered by any future opal exploration.

#### Kajeena Mining Company

EL10055 overlaps with the south western most third of EL29718. The tenure was explored by the Kajeena Mining Company for base metals, diamonds gemstones U, Sn and Ta between 2001 and 2004. Exploration consisted of a desktop review and drainage sampling with follow up of anomalies. Results were negative.

#### **Washington Resources**

EL24204 covers an area largely to the west of the tenure. The tenure was explored by Washington Resources between 2004 and 2008 for base metals, PGE, U (primary and calcrete) and REE. Exploration consisted of desktop review, aerial magnetic and radiometric surveys, heavy mineral concentrate, rock chip and scintillometer surveys. A drilling program was designed however heritage clearance was not forthcoming and in October 2008 the tenement was surrendered due to economic and political reasons.

#### Imperial Granite and Minerals

EL24535 overlaps with western portion of EL29718. The Tenure was explored for base

metals, Ni and Fe from 2007 to 2008 by Imperial Granite and Minerals. Exploration consisted of rock chip sampling of magnetic anomalies, results were poor. Elevated iron results came from a narrow (max. 1 meter wide) discontinuous vein with no apparent potential.

## **Eromanga Uranium**

EL25163 and EL25166 were explored by Eromanga Uranium between 2006 and 2008 for sedimentary uranium in paleochannels. An aerial electromagnetic survey was conducted over the entire project area which was followed up by geological reconnaissance. This suggested U prospectivity was poor due to the extent of Mesozoic sedimentation i.e. the Rumbalara Shale and Hooray Sandstone being significantly smaller then indicated on the geological maps made by the NTGS.

#### **Tri-Star Energy Company**

EL27218 overlaps with the western most area of EL29718. It was explored by the Tri-Star Energy Company in 2009 to 2010 for coal. Tri star determined the coal seam underlying the area was too deep to be economically mined. Exploration activities in the area uncovered a large ironstone deposit which Tri-Star actively explored. It was determined that the ironstone deposit lies to the west of EL27218 and therefore outside of EL29718. No further information was available on the ironstone deposit.

#### 5.3 Final Year

No exploration work was carried out within the reporting period. This was due to an internal change of management within NRE. The exploration activities are not recommencing and NRE have voluntarily surrendered EL 29718 in full.

#### 6.0 CONCLUSIONS

The current owners of Natural Resource Exploration Pty Ltd have re-assessed the literature for EL 29718. Due to the limited availability of data and the change of structure within NRE has prompted the decision by NRE to relinquish all the sub-blocks in the tenement.