

Open File Envelope

No. 12,218

EL 4601 AND EL 4602

THE WERTALOONA PROJECT

**JOINT ANNUAL REPORTS TO LICENCES' SURRENDER,
FOR THE PERIOD 8/11/2010 TO 3/9/2013**

Submitted by
ERO Mining Limited
2013

© 18/10/2013

This report was supplied as part of the requirement to hold a mineral or petroleum exploration tenement in the State of South Australia.
DMITRE accepts no responsibility for statements made, or conclusions drawn, in the report or for the quality of text or drawings.
This report is subject to copyright. Apart from fair dealing for the purposes of study, research, criticism or review as permitted under the Copyright Act, no part may be reproduced without written permission of the Executive Director of the DMITRE Resources and Energy Group, GPO Box 1264, Adelaide, SA 5001.

Enquiries:

Customer Services
Resources and Energy Group
7th Floor
101 Grenfell Street, Adelaide 5000

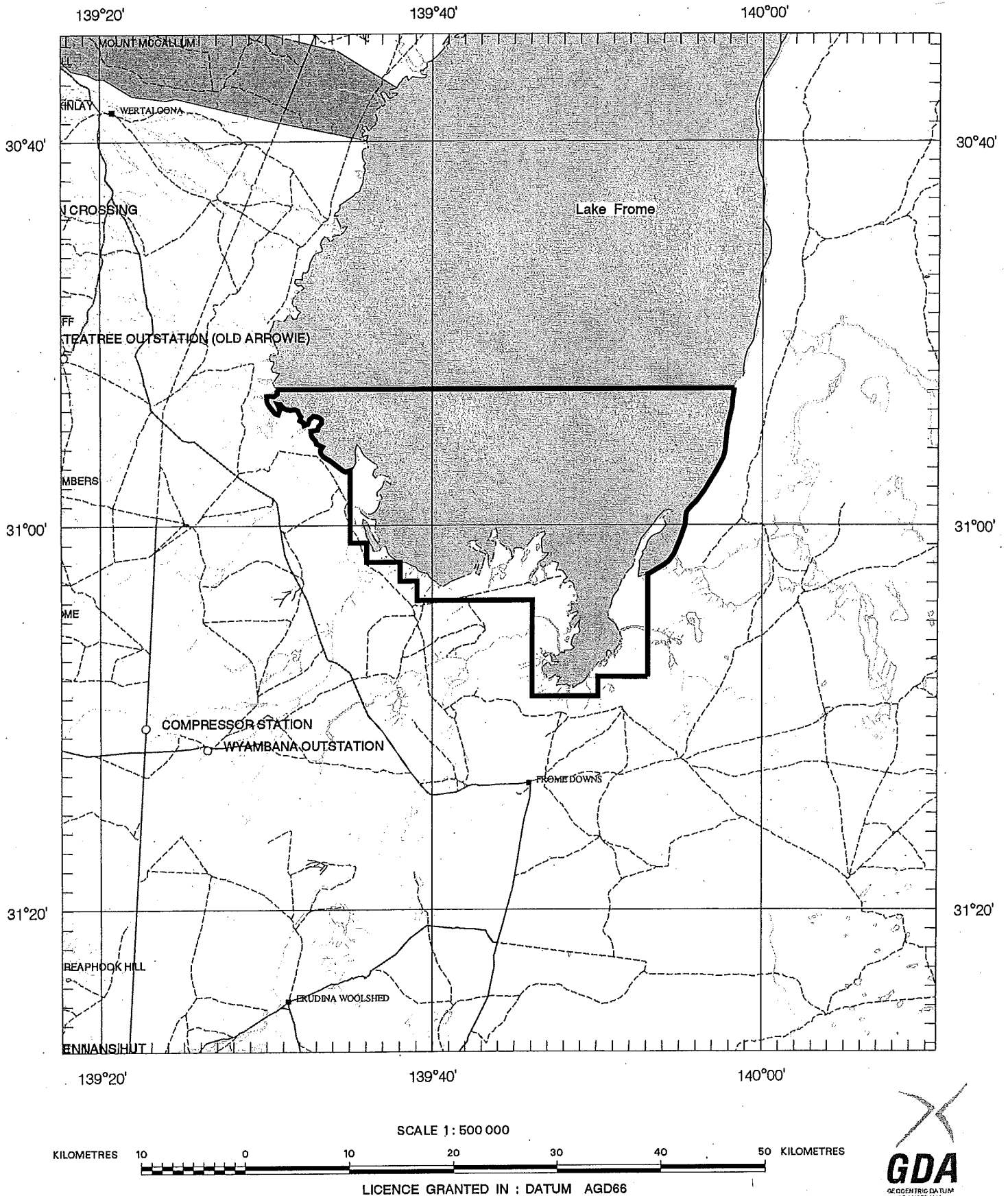
Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880



Government of South Australia

Department for Manufacturing,
Innovation, Trade, Resources and Energy

SCHEDULE A



APPLICANT : **SOUTH EAST ENERGY LTD**

FILE REF : **365/09**

TYPE : **MINERAL ONLY**

AREA : **782 km² (approx.)**

1:250000 MAPSHEETS : **FROME CURNAMONA**

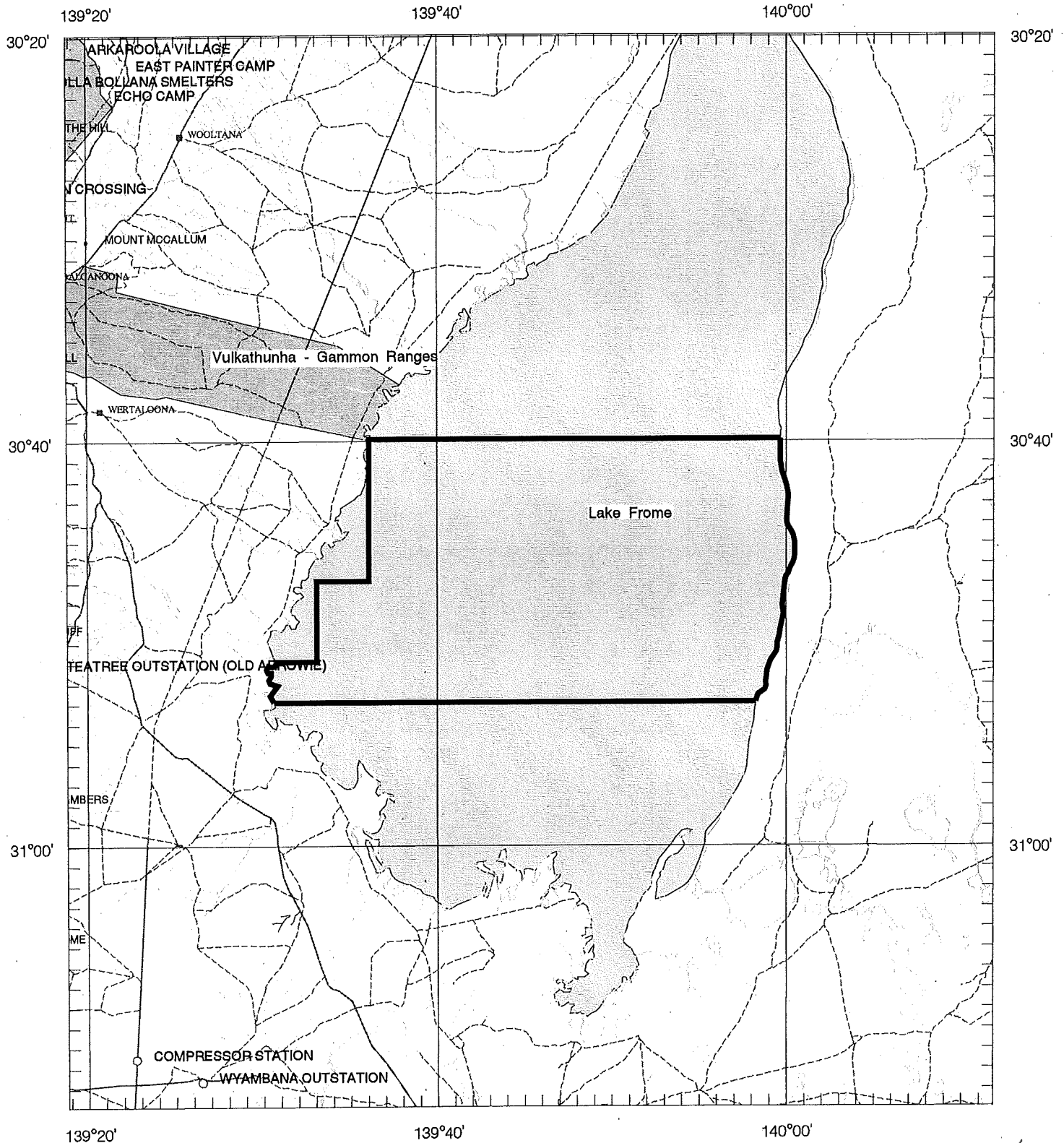
LOCALITY : **LAKE FROME SOUTH AREA AREA - Approximately 130 km southeast of Leigh Creek**

DATE GRANTED : **08-Nov-2010**

DATE EXPIRED : **07-Nov-2012**

EL NO : **4601**

SCHEDULE A



APPLICANT : SOUTH EAST ENERGY LTD

FILE REF : 366/09

TYPE : MINERAL ONLY

AREA : 975 km² (approx.)

1:250000 MAPSHEETS : FROME

LOCALITY : LAKE FROME NORTH AREA AREA - Approximately 130 km ESE of Leigh Creek

DATE GRANTED : 08-Nov-2010

DATE EXPIRED : 07-Nov-2012

EL NO : 4602



WERTALOONA PROJECT

**EL 4601 Lake Frome South
EL 4602 Lake Frome North**

COMBINED ANNUAL TECHNICAL REPORT

**For the period
8 November 2010 to 7 November 2011**

OPERATOR: ERO Mining Ltd

TENEMENT HOLDERS: South East Energy Ltd

**Authors : D.T. Miller Consulting Geophysicist
: F.M. Parker Tenement Manager
Report No: ERO_1116**

**Distribution: DMITRE
ERO**

Keywords

Lithium, Sonic Drilling, drill hole lithology, geochemistry, down hole geophysics, gamma log, water geochemistry, Lake Frome

TABLE OF CONTENTS

SUMMARY	1
1. INTRODUCTION	2
2. LOCATION AND ACCESS	2
3. TENURE	2
4. LAND TITLE	2
5. GEOLOGICAL BACKGROUND	2
6. RECENT EXPLORATION	2
6.1 SONIC Drilling	2
6.2 Downhole Geophysics	3
6.3 SAMPLE ANALYSIS	5
6.3.1 XRD	5
6.3.2 Geochemical analysis of wt2 sediments	5
6.3.3 WATER ANALYSIS DRILL HOLE WT2	7
6.3.4 WATER ANALYSIS OF LOCAL WATER BORES	7
7. REHABILITATION	7
8. SUMMARY AND CONCLUSIONS	8
9. REFERENCES	9

LIST OF FIGURES

- Figure 1** Exploration Index Map.
Figure 2 Gamma and Equivalent U_3O_8 Results

LIST OF TABLES

- Table 1** Summary of Activities
Table 2 Tenement Details as at November 2011
Table 3 Semi-quantitative analyses of five samples from WT2
Table 4 Trace Element Analyses
Table 5 Water Analyses WT2

LIST OF ASSOCIATED FILES

This report	EL4601_2011_A_01_reportbody.pdf
Drill collar table	EL4601_2011_A_02_WT2_DHcollar.xls
Lithology log	EL4601_2011_A_03_WT2_lithology.xls
Waterbore collar table	EL4601_2011_A_06_Waterbore_DHcollars.xls
Waterbore analysis	EL4601_2011_A_07_waterbore_analysis.xls
Downhole geophysics – gamma	EL4601_2011_A_05_WT2_gamma_log.las
Downhole geochemistry	EL4601_2011_A_04_WT2_DHgeochemistry.xls
Core inspection, sampling, analysis Comalco drillhole CF2	EL4601_2011_A_08_Comalco_CF2geochem.csv
File verification list	EL4601_2011_A_09_verificationList.xls

SUMMARY

The Wertaloona Project currently consisting of two exploration licences, ELs 4601 and 4602. These licences are 100% held by South East Energy Ltd, a wholly owned subsidiary of ERO Mining Ltd (ERO). The principal target for exploration is lithium within the Quaternary and Tertiary sediments within the Great Artesian Basin. Work carried out within the project area during the reporting period is summarised in Table 1.

Tenement	Activity	Description	Key Results
EL 4601	Drilling	Sonic cored, logging	Interbedded clay and sand, hole terminated in Bulldog shale
	Downhole Geophysical Surveys	gamma	Gamma log equivalent U_3O_8 , no significant results, further Result analysis pending
	Down hole chemistry	Sediment trace element analysis, water analysis	Result analysis pending
	Water bore sampling	Geochemistry salinity pH	No significant results

Table 1 Summary of Activities

1. INTRODUCTION

ERO Mining Ltd (ERO) undertook a sonic drilling program to test chemistry of all brines and sediments and flow volumes.

Drilling is ceased at the top of the Bulldog shale confining unit (Cadna-Owie Formation) to avoid intersection with the underlying GAB aquifer that is likely to be artesian.

Concurrently with drilling, a rapid, low cost radon survey was undertaken to delineate areas of high anomalism that may represent drill targets.

2. LOCATION AND ACCESS

The tenements are located in the southern part of Lake Frome, approximately 80km south southeast of Beverley on the Frome and Curnamona 1:250,000 mapsheets and the Frome and Pasmore 1:100,000 map sheets.

3. TENURE

ELs 4601 and 4602 were granted to South East Energy Ltd (a wholly owned subsidiary of ERO) on 8 November 2010..

Tenement Number	Tenement Name	Grant Date	Expiry Date	Current Area km²	Registered Holder
EL 4601	Lake Frome South	08.11.10	07.11.12	782	South East Energy Ltd
EL 4602	Lake Frome North	08.11.10	07.11.12	975	South East Energy Ltd

Table 2 Tenement Details as at November 2011

4. LAND TITLE

The tenements lie entirely within the Wertaloona pastoral lease the Adnyamathanha consent determination area.

5. GEOLOGICAL BACKGROUND

The area is underlain by Quaternary sediments, then Middle Tertiary Namba Formation, Early Tertiary Eyre Formation and Early Cretaceous Bulldog Shale and Cadna-owie Formation. The drill target areas lie at the southern boundary of the Great Artesian Basin. Estimated thickness variations of the Cadna-owie aquifer are 'low' in the vicinity (Welsh, 2006). Geological Survey of SA investigations in the area show the Cadna-owie Formation reaches a maximum thickness of 52m, but generally is much thinner and contains impermeable zones (Frome Explanatory Notes).

6. RECENT EXPLORATION

6.1 SONIC DRILLING

One fully cored reference hole was drilled to the base of the Eyre Formation at WT2 (Figure 1) to test chemistry of all brines and sediments and flow volumes. This hole was located in close proximity to a hole drilled by Comalco (Hole ID CF2) in the 1970's where elevated lithium levels were encountered. Details of the drilling program have been poorly recorded, drill core is currently stored at Wertallona Station. The collar location is within the area cleared for drilling, the collar coordinates are imprecisely known. It is assumed that the hole is vertical.

Drilling ceased at the top of the Bulldog shale (intersected at a depth of 149m) confining unit (Cadna-Owie Formation) to avoid intersection with the underlying GAB aquifer that is likely to be artesian.

A semi-quantative log of the core has been completed. The drill hole intersected a thick sequence of interbedded clays and sands (fine to coarse) with varying amount of carbonaceous material.

All data associated with the drill hole are contained in the attached digital data files.

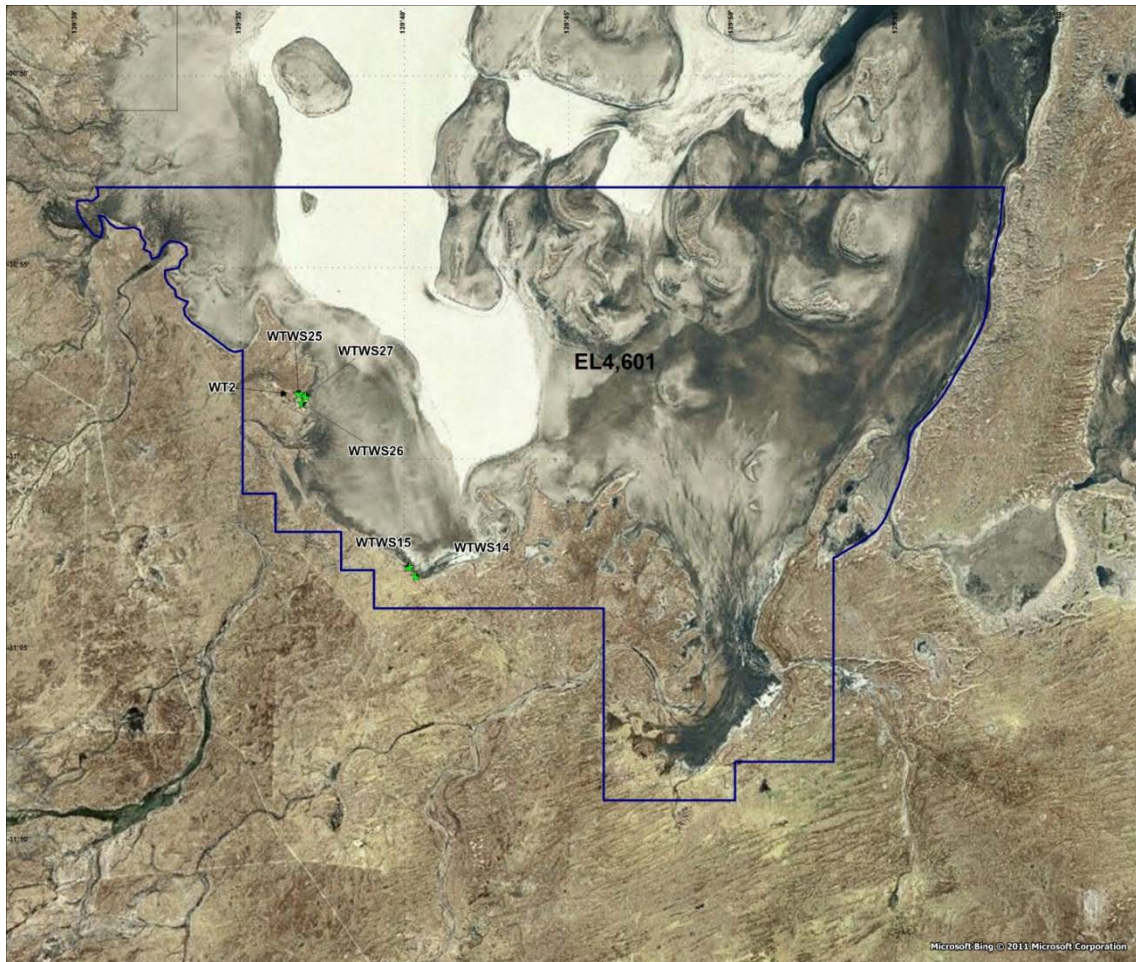


Figure 1: Exploration Index Map

6.2 DOWNHOLE GEOPHYSICS

A gamma log was completed at the end of the drilling program. Data is supplied with the report in LAS format. Figure 2 shows the gamma and equivalent U_3O_8 results.

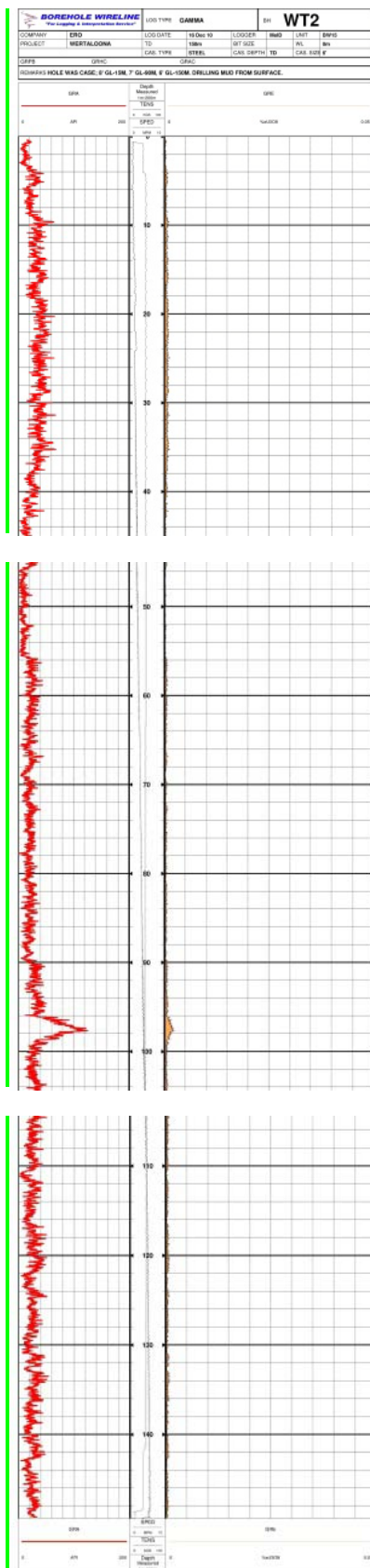


Figure 2: Gamma and equivalent U3O8 results

6.3 SAMPLE ANALYSIS

6.3.1 XRD

Five samples were taken from the drill core for XRD analysis WT2-10, WT2-19, WT2-26, WT2-34, and WT2-63. It is assumed that the sample depth is the suffix of the sample numbers.

The semi-quantitative mineralogies of the samples follow.

Mineral	Composition	WT2-10	WT2-19	WT2-26	WT2-34	WT2-63
Mixed layer clay	Silicate	D	D	D	D	D
Quartz	SiO ₂	SD	A	A		SD
Illite	KAl ₂ Si ₃ AlO ₁₀ (OH) ₂	A	A	A	A	
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄	Tr-A	Tr	Tr		A
Muscovite	KAl ₂ Si ₃ AlO ₁₀ (OH) ₂	Tr	Tr	Tr	Tr	Tr
Plagioclase feldspar	(Na,Ca)(Si,Al) ₄ O ₈	Tr				
K-feldspar	KAlSi ₃ O ₈			Tr		Tr
Dolomite	CaMg(CO ₃) ₂	Tr-A			A	
Gypsum	CaSO ₄ .2H ₂ O	Tr				
?Anatase	TiO ₂		Tr	Tr		Tr

Table 3: Semi-quantitative mineralogies of five samples from WT2

[The K₂O content of K-feldspar is about 19%, of muscovite is about 10%, of illite is less than muscovite (about 6 to 8%). The mixed layer clay is probably an interlayered smectite-illite and hence would have a lower K₂O content than illite – probably 2 to 4%]

Semiquantitative Abbreviations:

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
- S = Sub-dominant. The next most abundant component(s) providing its percentage level is judged above about 20.
- A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
- T = Trace. Components judged to be below about 5%.
- r

6.3.2 GEOCHEMICAL ANALYSIS OF WT2 SEDIMENTS

A basic suite of trace elements were selected for analysis on 1m intervals of the core sample. The results are provided with the report. The lithium results are shown in table 4. The lithium results from the circa 1970 Comalco drill hole are also provided in this table. For direct comparison purposes the drill core from the CF2 Comalco hole were resampled and assayed [NB no collar table is provided as this drill hole is housed at the Glenside PIRSA core library and a separate report will be supplied as per the core library policy]. The laboratory results are provided with this report (Comalco_CF2_resample_geochem.xls).

Four (4) additional samples were taken for detailed trace element analysis including rare earth elements. Unfortunatasey the depth and other details of these samples have been lost at the time of writing this report. The data has not been submitted with this report.

WT2 Depth metres	WT2 Lithium (Li) ppm	Located CF2 Cuttings Depth metres	Retested CF2 Cuttings Lithium (Li) ppm	COMALCO CF2 Depth Metres	COMALCO CF2 Lithium (Li) ppm
0-2	nr	0-2	14.6		
2-3	nr				
3-4	nr	2-4	29.3		
4-5	15.8				
5-6	10.6	4-6	48.8		
6-7	23.2				
7-8	23.1	6-8	45.3		
8-9	20.2				
9-10	23.9	8-10	62.6	0-10	250
10-11	27.4				
11-12	38.9	10-12	62.0		
12-13	40.3				
13-14	39.1	12-14	68.2		
14-15	34.1				
15-16	30.3	14-16	87.0		
16-17	43.8				
17-18	43.0	16-18	86.1		
18-19	33.6				
19-20	39.2	18-20	91.9	10-20	30
20-21	48.9				
21-22	55.6	20-22	83.6		
22-23	59.2				
23-24	58.7	22-24	80.3		
24-25	56.4				
25-26	61.8	24-26	99.4		
26-27	65.1				
27-28	69.2	26-28	86.6		
28-29	63.7				
29-30	65.0	28-30	88.1	20-30	100
30-31	64.3				
31-32	47.1	30-32	44.2		
32-33	55.3				
33-34	61.9	32-34	25.9		
34-35	54.1				
35-36	40.6	34-36	22.5		
36-37	38.3				
37-38	36.7	36-38	11.8		
38-39	34.6				
39-40	26.2	38-40	10.2	30-40	200
40-41	15.5				
41-42	20.8	40-42	15.0		
42-43	14.9				
43-44	17.6	42-44	16.4		
44-45	21.2				
45-46	14.3	44-46	16.6		
46-47	12.4				
47-48	17.7	46-48	19.9		
48-49	17.3				
49-50	17.9	48-50	22.6	40-50	100
50-51	16.5				
51-52	16.9	50-52	18.5		
52-53	19.5				
53-54	14.9	52-54	29.2		
54-55	13.6				
55-56	16.6	54-56	10.2		
56-57	17.8				
57-58	16.1	56-58	14.3		
58-59	16.3				
59-60	25.9	58-60	23.9	50-60	250
60-61	26.7				
61-62	29.1	60-62	28.8		
62-63	15.0				
63-64	15.8	62-64	13.1		
64-65	16.1				
65-66	21.1	64-66	15.5		
66-67	19.9				
67-68	19.5	66-68	14.4		
68-69	14.4				
69-70	15.7	68-70	14.8	60-70	250
70-71	23.0				
71-72	21.2	70-72	19.7		
72-73	23.3				
73-74	22.9	72-74	22.6		
74-75	19.9				
75-76	24.9	74-76	6.6		
76-150	8.0 to 39.5	End of hole		70-80	200

Table 4: Trace element analyses

6.3.3 WATER ANALYSIS DRILL HOLE WT2

Six samples were taken for water analysis from the drill hole. The results are provided with the report.

SAMPLE NUMBERS	DEPTH
WT2WS1	22m
WT2WS2	40m
WT2WS3	41.5m
WT2WS4a	43m
WT2WS4b	46m
WT2WS5	88m

TABLE 5: Water analyses WT2

6.3.4 WATER ANALYSIS OF LOCAL WATER BORES

Five local water bores were sampled (samples WTWS14, 15, 25, 26 and 27) to provide some background water chemistry data. The results of this analysis are in this report (EL4601_waterbore_analysis.xls; EL4601_waterbore_collars.xls). Figure 1 shows the location of all sample locations.

7. REHABILITATION

Plastic lined earthen mud sumps were utilised to contain fluids and cuttings at the drill site. The diamond hole was collared through a hole in the bottom of a metal collar tray using a blade bit. A PVC collar pipe was then inserted, through which the diamond drilling will be carried out. Any gap in the bottom of the collar tray was sealed by a rubber matting seal that slides over the top of the collar pipe and sits on the base of the collar tray. This prevents drilling return fluids from leaking through the hole onto the ground.

At completion of drilling, the hole was completed in line with PIRSA Information contained in Sheet M21; Mineral Exploration Drillholes -General Specifications for Construction and Backfilling. The abandonment procedure plug was within the Eyre Formation.

Drill holes abandonment procedure for intersected single confined aquifers:

- The main objective in sealing holes in single confined aquifers was to contain water in the aquifer.
- The hole was plugged across formation contained aquifers confining bed interface for a thickness of about 20 metres (m) and 2m above the interface and 2m below
- Had groundwater been encountered or a significant thickness of sand penetrated the aquifer would have been plugged from the level at which the aquifer was penetrated with cement grout back to a minimum of 15 m into the confining bed above and then backfilled.
- To maintain an effective seal between the Eyre and Namba formations the thickness of the plug separating them was a minimum of 20m.
- The hole was plugged at least 1 metre below ground level with a non-degradable plug or bridge. The plug was at least 50 millimetres larger than the diameter of the drill hole but depending on the nature of the ground of sufficient size to remain firmly in position.
- To enable the placement of the plug the hole may have been reamed-out to 1m depth with hand tools or counter-bored by the drill rig with a larger drill bit, backfilled with compacted earth and mounded over at the surface.

8. SUMMARY AND CONCLUSIONS

The Lake Frome exploration program included a single drill hole WT2 to test the Lake Frome sedimentary sequence and associated hydro-geologic setting for lithium in saline brines. The drilling intersected elevated lithium.

9. REFERENCES

Drexel, J.F., Preiss, W.V. and Parker, A.J. 1993. The Geology of South Australia. Volume 1, The Precambrian. *South Australia Geological Survey Bulletin 54.*

Callen, R.A., 1981 Frome SH54-10, 1:250,000 Explanatory Notes



12 December 2012

Records Officer
Mineral Tenements and Exploration Branch – DMITRE
GPO Box 1264
ADELAIDE SA 5001

Dear Sir or Madam,

**Wertaloona Combined Annual Technical Report
ELs 4601 and 4602 for the period 08.11.11 – 07.11.12**

No field work was conducted on this tenement during the reporting period. Subsequently there is no data to submit to PIRSA. We therefore request that this letter be accepted in lieu of an annual report.

Please contact me if you require further information, phone 0466-580-672, email fran.parker@westnet.com.au .

Yours sincerely,

A handwritten signature in black ink, appearing to read "FM Parker".

Fran Parker (Dr)
Tenement Manager



11 October 2013

Records Officer
Mineral Tenements and Exploration Branch – DMITRE
GPO Box 1264
ADELAIDE SA 5001

Dear Sir or Madam,

**Wertaloona Combined Final Technical Report
ELs 4601 and 4602 for the period 08.11.10 – 3.09.13**

No field work was conducted on this tenement since submission of the last annual report. Subsequently there is no data to submit to DMITRE. We therefore request that this letter be accepted in lieu of a final report.

Please contact me if you require further information, phone 0466-580-672, email fran.parker@westnet.com.au .

Yours sincerely,

A handwritten signature in black ink, appearing to read "FM Parker".

Fran Parker (Dr)
Tenement Manager