

ST JOE BONAPARTE PTY. LTD.

E.L. 1708 - MILLIGANS LAGOON

ANNUAL REPORT
FOR THE YEAR ENDING 8 FEBRUARY, 1982.

Distribution

St Joe Bonaparte - Files (2) Mimets (2)
Kununurra (2)

AAM:

John Lee (1)

Ole Borch (1)

SJB: 82-10

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Date: April, 1982.

CR82/185

CONTENTS

1. INTRODUCTION
2. GEOLOGY
3. CONCLUSIONS AND RECOMMENDATIONS
4. EXPENDITURE
5. REFERENCES

FIGURES

Figure 1 Bonaparte Gulf Basin. Northern Territory
Tenements.
Scale 1:500,000

Dwg. Nos.

17536

PLATES

Plate 1 Location and Regional Geology, The Fences
E.L. 2169 and Milligans Lagoon E.L. 1708.
Scale 1:50,000

16552 C

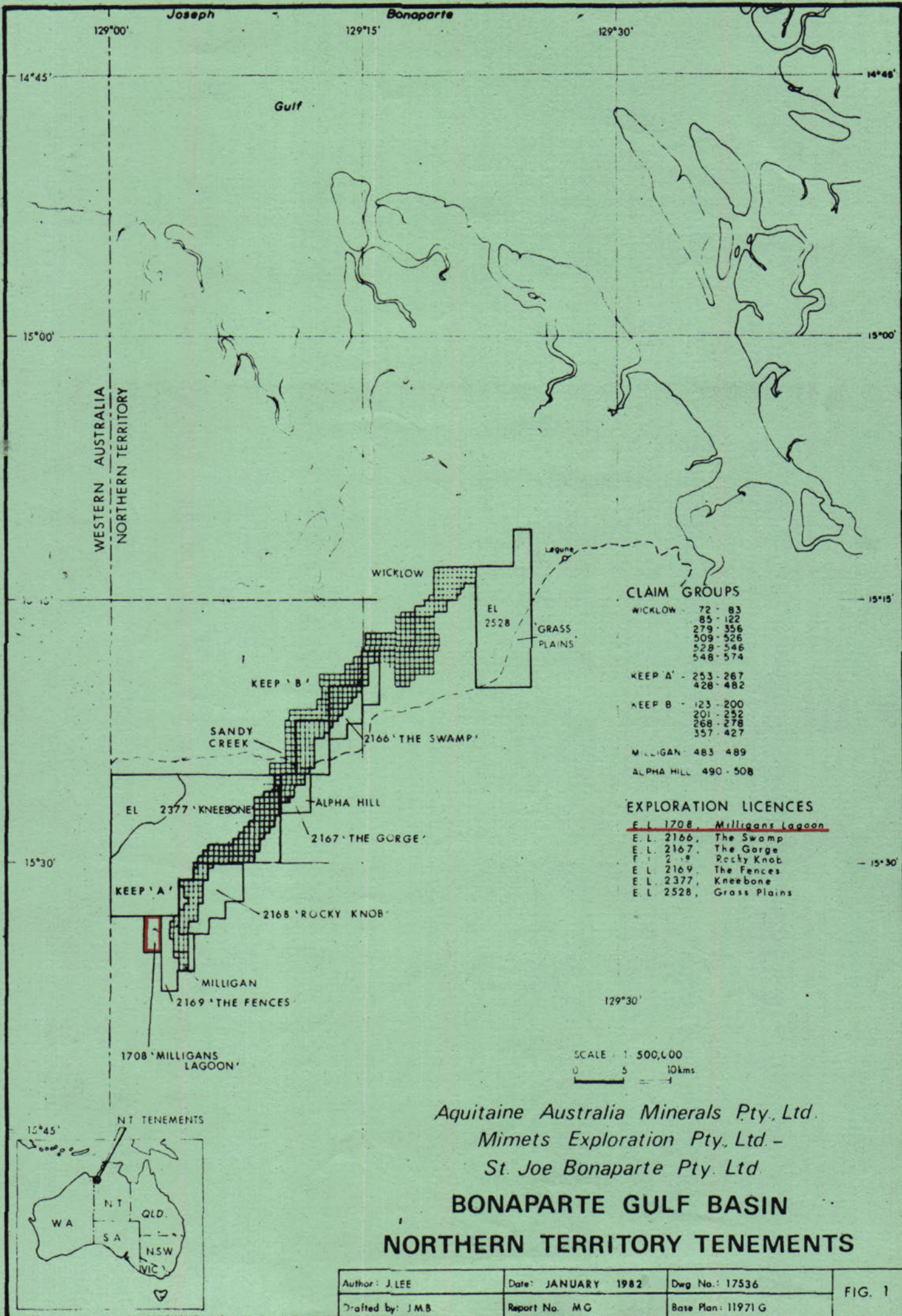
1. INTRODUCTION

The 'Milligans Lagoon' E.L. 1708 was originally granted on 8th February, 1978. After two subsequent 50% reductions in February, 1980 and February, 1981 the residual licence area presently covers approximately 7.5 square kilometres as shown in Figure 1.

E.L. 1708 is located on the south western part of the Spirit Hill outcrops. The licence lies approximately 3.5 kilometres from the Western Australian - Northern Territory border and is 15 kilometres south east of the Sorby Hills exploration base and 40 kilometres north easterly of the township of Kununurra.

Access to the E.L. is possible from the Western Plains road just east of Sorby Hills along the border fence track. Alternatively access from Kununurra is via station tracks through Martin Gap past Milligans Lagoon.

Exploration in E.L. 1708 during 1981 was undertaken in conjunction with work on the adjacent "Keep A" mineral claims and Rocky Knob E.L. 2168. In these areas follow-up investigation during 1981 of surface showings of lead and zinc mineralisation included the drilling of three precollared stratigraphic diamond holes for a total drilled meterage of approximately 765 meters.



WESTERN AUSTRALIA
NORTHERN TERRITORY

Joseph

Bonaparte

129°00'

129°15'

129°30'

14°45'

14°45'

Gulf

15°00'

15°00'

15°15'

15°15'

15°30'

15°30'

129°30'

CLAIM GROUPS

WICKLOW	72 - 83
	85 - 122
	279 - 356
	509 - 526
	528 - 546
	548 - 574
KEEP 'A'	253 - 267
	428 - 482
KEEP 'B'	123 - 200
	201 - 252
	268 - 278
	357 - 427
MILLIGAN	483 - 489
ALPHA HILL	490 - 508

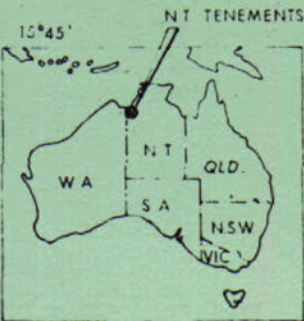
EXPLORATION LICENCES

<u>E. L. 1708</u>	<u>Milligans Lagoon</u>
E. L. 2166	The Swamp
E. L. 2167	The Gorge
E. L. 2169	Rocky Knob
E. L. 2169	The Fences
E. L. 2377	Kneebone
E. L. 2528	Grass Plains

SCALE 1:500,000
0 5 10 kms

Aquitaine Australia Minerals Pty. Ltd.
Mimets Exploration Pty. Ltd.
St. Joe Bonaparte Pty. Ltd.

**BONAPARTE GULF BASIN
NORTHERN TERRITORY TENEMENTS**



Author: J. LEE	Date: JANUARY 1982	Dwg No.: 17536	FIG. 1
Drafted by: J.M.B.	Report No. MG	Base Plan: 11971 G	

2. GEOLOGY

The geology and stratigraphy of the south western portion of the Spirit Hill area covered by E.L. 1708 has been described in some detail by Veevers and Roberts (1968). The geology of the area is shown on Plate 1 which is a modified geological map after Veever and Roberts.

In the southern area of the licence three stratigraphic bores, Spirit Hill Nos. 1, 2 and 3 were drilled to a depth of up to 90 meters during early oil exploration work in the Spirit Hill area. Veevers and Roberts describe the sequence penetrated by the Spirit Hill bores as a hard grey shale sequence with thin sandy limestone and siltstone interbeds which has been identified as Milligans Beds. Just to the north of the Spirit Hill bores at B.M.R. Locality 73 Veevers and Roberts measured a section across the outcrops where shale of the Milligans Beds is unconformably overlain by a high turreted cliff forming sequences of sandstone and conglomerate which is identified as the Border Creek formation. At Locality 73 the Border Creek formation attains a thickness in excess of 100 meters.

The stratigraphic drilling by the Aquitaine - Mimets - St Joe Joint Venture in the Cuesta Ridge (Spirit Hill) area during 1981 was located two to three kilometres east and north-east of E.L. 1708 in the adjacent 'Keep A' mineral claims and the 'Rocky Knob' E.L. 2168. The stratigraphic drill holes (NBB 5001, 5002 and 5003) seem to confirm the presence of a major structural high (anticline) through the central Spirit Hill outcrops. The anticline plunges northwards towards the Spirit Hill No. 1 well. The structural high appears to be faulted, at least to the south, by a major normal fault (Spirit Hill fault). In this southern area estimated vertical displacement (west side down) in excess of 250 meters has occurred. Mineralisation in the area occurs in the Burt Range formation carbonates in apparent close association with the Spirit Hill fault structures.

3. CONCLUSIONS AND RECOMMENDATIONS

Because of the thick cover of Milligans Beds and Border Creek formation over the Burt Range formation carbonates in E.L. 1708 additional work in this licence during the 1982 field season will be dependent on the results of the exploration work in the adjacent tenements.

Further work, including diamond drilling, is proposed during 1982 to determine the potential for development of significant lead and zinc mineralisation within the Burt Range formation carbonates along the Spirit Hill fault structures in the adjacent 'Keep A' mineral claims and the 'Rocky Knob' E.L. 2168.

4. EXPENDITURE

The following expenditure was incurred during the annual period ending February 8, 1982.

Consumables	842.60
Field Hand Costs	5,408.55
Repair and Maintenance Site Bldgs and Equipment	802.80
Repair and Maintenance Site Vehicles	276.05
Utilities	588.92
Travel and Subsistence	95.00
Freight and Cartage	402.76
Laboratory Analysis	190.00
Communications	125.00
Minerals Salaries	1,070.00
Printing and Drafting	65.00
Lands and Contracts	70.00
Depreciation	9,543.26
Overheads	802.49
	<u>20,282.43</u>

5. REFERENCES

Thomas, G.A., 1961: Well Completion Report. Spirit Hill Well No. 1.
Private Report to Oil Development NL (19 December, 1961)

Veevers, J.J. and Roberts, J., 1968: Upper Palaeozoic Rocks,
Bonaparte Gulf Basin of Northwestern Australia. Bureau
of Mineral Resources, Geology and Geophysics, Bulletin 97.

