15.4

EXPLORATION LICENCE 4562

ANNUAL REPORT FOR FOURTH YEAR

23 SEPTEMBER, 1986 TO 22 SEPTEMBER, 1987

for

F.E. Henry, N.J. Walker, E. Bailey, and J.G. Wright

by

Susan H Hickey B.Sc(Hons)

EUPENE EXPLORATION ENTERPRISES

November, 1987
DARWIN N.T.

Ranford Hill
1: 100,000

CONTENTS PAGE

FIGURES

APPENDIX

1 INTRODUCTION

EL 4562 covers 94 blocks, some 303 square kilometres over the main branches of the Wandie Creek and Fergusson River in the southwest corner of the Ranford Hill 1:100 000 map sheet.

Exploration is targeted at gold, base metals tin and associated minerals. The licence is situated 5km southwest from the highly prospective Wandie Gold Field, downstream Wandie Creek.

2 TENURE

EL 4562 was granted to Messrs Henry, Walker, Bailey and Wright on 23 September, 1986 for a period of six years.

This report represents the first annual report on the licence which covers an area of 303 square kilometres (Figure 1).

3 GEOLOGY

The detailed geology of the area is covered by the 1:100 000 Geological Map Series for RANFORD HILL by Bagas et al, 1986.

The southwest portion of RANFORD HILL consists of the Early Proterozoic, Burrell Creek Formation and the Cullen Granite Batholith.

Burrell Creek Formation

The Burrell Creek Formation of the Finniss River Group occurs in the eastern portion of the licence and is made up of grey brown phyllite, siltstone and feldspathic greywacke. Pebble conglomerate (volcanic) and banded green chloritic phyllite and siltstone occur in places.

The unit is regionally metamorphosed to greenschist facies and locally metamorphosed to amphibiolite facies in contact with the Cullen Granite Batholith. Biotite, andalusite and cordirite hornfels are common accessory minerals near the Cullen Granite Batholith contract.

Cullen Granite Complex

In the licence area the Cullen Granite Batholith can be differentiated broadly into the Allamber Springs Granite, McCarthy's Granite and Driffield Granite.

The Allamber Springs Granite takes up half of the batholith in the licence area and consists of a variety of pink to green porphyritic hornblende-biotite granite, pink coarse porphyritic biotite leucogranite and pink coarse equigranular biotite leucogranite.

The McCarthy's Granite forms the central portion of the batholith in the licence and consists of similar granite and leucogranite to Allamber Springs Granite, as well as grey coarse porphyritic granite, fine to medium grey to pink equigranular leucogranite and fine to medium equigranular alkali feldspar granite.

The Driffield Granite forms the southern portion of the licence. It consists of a variety of coarse porphyritic pink hornblende-biotite

granite, grey coarse porphyritic biotite granite and coarse pink to grey equigranular and porphyritic leucogranite.

The Frances Creek Granite forms an isolated granite pod with the Bludells Monzonite within the McCarthy's Creek Granite. The Frances Creek Granite consists predominantly of pink to grey, fine to medium equigranular leucogranite and fine to medium, equigranular alkalie feldspar granite. The Bludells Monzonite consists predominantly of grey to green medium equigranular biotite-hornblende-quartz monzonite and biotite-hornblende-quartz syenite.

Lineaments, quartz veins and shear zones are common throughout the Cullen Granite Batholith.

4 WORK COMPLETED AND EXPENDITURE

The first year of tenure field programme involved geological mapping and stream sediment sampling (Figure 2).

Once suitable sites were identified two stream sediment samples were taken; 5kg at 1 inch mesh size and 300g at 80 # mesh size.

The 106 samples were assayed for As, Cu, Pb, Zn, W and Sn and for bulk cyanide gold leach analyses.

Our clients also planned to undertake a detailed costean programme to identify suitable tin and tantalum deposits in the licence area. Due to the depressed nature of the tin market this programme was not carried out. This has resulted in a shortfall of some $17,500.00 from the proposed expenditure of $40,000.00 for the 1986/1987 period of tenure.

We regret the shortfall, however we did concentrate our efforts on identifying suitable gold and associated minerals with our stream sediment sampling programme.

The assay results for the stream sediment sampling programme are detailed in Appendix A.

The results are quite varied in value, however they are encouraging in part.

Expenditure for Year One 1986/1987

D6 Dozer Hire for Track Construction	$5,000.00
Vehicle Costs/Hire @ $50.00 per day	700.00
Messing Charges @ $20.00 per day	280.00
Aerial Photograph Purchase	2,224.00
Assay Analyses	5,300.00
Field Assistant @ $200.00/day	2,800.00
Prospector and Driver Wages	4,760.00
Consulting Geologist @ $300/day	900.00
Drafting and Administrative Fees	614.00
TOTAL	$22,578.00

5 WORK PROPOSAL AND EXPENDITURE FOR 1987/1988

A detailed 40 mesh sized stream sediment sampling programme will be undertaken. Rock chip sampling will also take place to augment the stream sediment sampling.

Costeans will be dug in areas which show promise. If anomalous areas are identified, drilling may take place.

A minimum expenditure of $15,000.00 will be spent on the licence during the second year of tenure.

If the tin prices continue to rise we will consider resurrecting the costean tin sampling programme we proposed for year one.

6 REFERENCES

BAGAS, L.. STUART-SMITH, P.C., NEEDHAM, R.S. AND GALLAGHER, J.A. 1:100 000 GEOLOGICAL MAP SERIES, RANFORD HILL 5370, BUREAU OF MINERAL RESOURCES AND GEOPHYSICS MAP SERIES, 1986.

APPENDIX A

Stream Sediment Assay Results

21101 to 21200

21301 to 21306

914.0.13.03498 04/11/87 2079 1

	Cu	Zn	As	Sn	W	Au	Pb	Drywt
21101	5	20	9	4	<10	0.46	10	5.2
21102	10	15	8	14	<10	0.18	15	6.0
21103	5	10	<2	13	<10	0.27	15	6.1
21104	5	15	4	8	<10	0.45	15	5.2
21105	5	15	5	6	<10	0.36	10	5.7
21106	5	10	3	16	<10	0.36	10	5.7
21107	-	-	-	-	-	-	-	SNR
21108	5	15	2	12	<10	0.18	10	6.0
21109	5	15	10	23	<10	<0.05	5	4.9
21110	5	10	<2	7	<10	0.27	10	6.0
21111	5	15	3	7	<10	0.18	10	5.7
21112	5	15	9	14	<10	0.18	10	5.2
21113	5	10	<2	7	<10	0.36	<5	5.8
21114	5	15	4	28	<10	0.32	<5	5.5
21115	<5	5	2	22	<10	0.19	<5	6.2
21116	<5	5	3	4	<10	<0.05	<5	5.8
21117	5	15	42	35	<10	0.71	10	2.5
21118	5	15	<2	13	<10	<0.05	10	6.3
21119	5	20	2	9	<10	<0.05	5	5.0
21120	<5	10	7	7	<10	0.75	10	5.6
21121	5	15	<2	7	<10	0.57	<5	5.9
21122	5	15	6	17	<10	-	20	SNR
21123	5	10	3	13	<10	0.39	15	5.7
21124	10	20	11	22	<10	0.64	15	5.5
21125	5	20	3	18	<10	0.31	<5	6.1

Galene
fix these sheets in permanently
please.
Jon.

914.0.13.03430 17/10/87 2033 1 2

	Cu	Zn	As	Sn	Au	Pb	Drywt
21151	25	30	15	10	1.16	20	4.1
21152	20	30	5	7	0.91	10	5.5
21153	15	25	7	3	1.06	10	5.5
21154	10	20	7	30	0.72	5	3.6
21155	10	20	<2	8	0.68	10	4.6
21156	5	20	<2	5	0.41	15	4.7
21157	5	25	<2	3	0.32	15	3.7
21158	5	20	<2	7	0.29	10	4.0
21159	5	15	<2	4	0.64	10	5.0
21160	15	40	4	6	0.75	10	5.1
21161	10	25	4	10	SNC	20	SNC
21162	15	25	4	10	1.56	15	4.9
21163	15	30	10	7	0.75	20	3.6
21164	15	25	9	20	1.61	10	5.5
21165	15	30	7	9	0.84	20	5.7
21166	10	25	<2	10	0.70	5	5.0
21167	20	35	9	20	0.93	15	5.7
21168	20	35	20	10	0.95	15	4.5
21169	15	25	9	15	1.25	15	5.3
21170	15	35	3	<3	0.67	15	6.1
21171	5	15	<2	5	0.34	15	5.5
21172	<5	25	<2	7	0.26	15	6.1
21173	<5	20	<2	<3	0.16	10	5.1
21174	<5	15	<2	<3	0.54	10	6.9
21175	<5	15	<2	6	0.64	5	6.5

914.0.13.03430 19/10/87 2033 2 2

	Cu	Zn	As	Sn	Au	Pb	Drywt
21176	<5	10	<2	3	0.27	15	5.0
21177	BNR	BNR	BNR	BNR	0.25	BNR	6.0
21178	<5	25	<2	5	0.16	10	6.3
21179	<5	45	<2	<3	0.49	20	6.1
X	<5	15	<2	<3	1.27	15	5.9
DETECTION	5	5	2	3	0.05	5	0.1
UNITS	PPM	PPM	PPM	PPM	PPB	PPM	KG
METHOD	401	401	401	401	328	401	328

914.0.13.03498 04/11/87 2079 2

	Cu	Zn	As	Sn	W	Au	Pb	Drywt
21126	5	10	<2	72	<10	0.27	15	5.4
21127	–	–	–	–	–	<0.05	–	6.0
21128	10	55	20	6	<10	<0.05	25	6.4
21129	15	25	2	25	<10	0.18	20	4.8
21130	15	25	7	17	<10	0.28	10	5.4
21131	–	–	–	–	–	<0.05	–	5.7
21132	15	55	27	23	<10	<0.05	35	6.3
21133	10	40	7	97	<10	<0.05	15	5.3
21134	10	20	11	13	<10	0.46	<5	6.0
21135	15	25	13	20	<10	0.48	15	5.7
21136	25	40	14	20	<10	<0.05	25	3.5
21137	–	–	–	–	–	0.69	–	4.6
21138	–	–	–	–	–	0.20	–	6.8
21139	5	15	5	3	<10	0.18	10	5.9
21140	5	25	5	9	<10	0.18	20	7.1
21141	30	35	7	20	<10	0.18	30	3.8
21142	20	25	18	25	<10	0.28	15	5.7
21143	10	20	5	92	<10	0.28	5	5.0
21144	20	30	19	25	<10	0.29	<5	5.0
21145	30	50	22	24	<10	0.39	15	6.3
21146	–	–	–	–	–	0.17	–	5.4
21147	–	–	–	–	–	0.38	–	5.8
21148	–	–	–	–	–	0.50	–	6.1
21149	–	–	–	–	–	0.19	–	4.8
21150	–	–	–	–	–	0.22	–	6.4

	Cu	Zn	As	Sn	W	Au	Pb	Drywt
21151	---	---	---	---	---	---	---	SNR
21152	---	---	---	---	---	---	---	SNR
21153	---	---	---	---	---	---	---	SNR
21154	---	---	---	---	---	---	---	SNR
21155	---	---	---	---	---	---	---	SNR
21156	---	---	---	---	---	---	---	SNR
21157	---	---	---	---	---	---	---	SNR
21158	---	---	---	---	---	---	---	SNR
21159	---	---	---	---	---		---	SNR
21160	---	---	---	---	---	---	---	SNR
21161	---	---	---	---	---	---	---	SNR
21162	---	---	---	---	---	---	---	SNR
21163	---	---	---	---	---	---	---	SNR
21164	---	---	---	---	---	---	---	SNR
21165	---	---	---	---	---	---	---	SNR
21166	---	---	---	---	---	---	---	SNR
21167	---	---	---	---	---	---	---	SNR
21168	---	---	---	---	---	---	---	SNR
21169	---	---	---	---	---	---	---	SNR
21170	---	---	---	---	---	---	---	SNR
21171	---	---	---	---	---	---	---	SNR
21172	---	---	---	---	---	---	---	SNR
21173	---	---	---	---	---	---	---	SNR
21174	---	---	---	---	---	---	---	SNR
21175	---	---	---	---	---	---	---	SNR

	Cu	Zn	As	Sn	W	Au	Pb	Drywt
21176	--	--	--	--	--	--	--	SNR
21177	--	--	--	--	--	--	--	SNR
21178	--	--	--	--	--	--	--	SNR
21179	--	--	--	--	--	--	--	SNR
21180	5	15	9	16	<10	0.40	15	4.9
21181	<5	15	<2	10	<10	0.18	20	6.2
21182	5	15	<2	16	<10	0.47	10	6.4
21183	<5	10	7	<3	<10	0.27	5	6.2
21184	5	10	3	8	<10	0.36	10	6.2
21185	5	10	6	6	<10	0.27	<5	7.1
21186	5	15	11	8	<10	0.38	5	6.5
21187	5	20	<2	12	<10	0.36	5	6.2
21188	<5	10	3	8	<10	0.22	<5	5.9
21189	<5	10	<2	9	<10	<0.05	<5	5.6
21190	10	25	10	16	<10	<0.05	<5	4.4
21191	15	25	7	11	<10	<0.05	<5	4.0
21192	5	15	4	9	<10	0.18	<5	6.6
21193	5	20	2	5	<10	0.19	<5	6.4
21194	5	15	<2	8	<10	0.34	5	5.5
21195	5	15	<2	7	<10	0.28	<5	6.1
21196	5	15	8	6	<10	0.26	<5	6.0
21197	<5	20	<2	6	<10	0.17	<5	5.8
21198	<5	15	5	10	<10	0.50	<5	6.0
21199	<5	20	4	<3	<10	0.28	5	6.5
21200	<5	10	6	7	<10	0.26	<5	6.2

	Cu	Zn	As	Sn	W	Au	Pb	Drywt
21301	15	30	21	49	<10	0.29	<5	4.2
21302	10	20	9	18	<10	0.26	10	5.5
21303	5	20	8	29	<10	0.63	10	6.9
21304	5	20	3	15	<10	0.28	5	5.7
21305	5	15	3	10	<10	0.25	<5	6.6
21306	5	20	<2	<3	<10	0.24	<5	7.2
DETECTION	5	5	2	3	10	0.05	5	0.1
UNITS	PPM	PPM	PPM	PPM	PPM	PPB	PPM	KG
METHOD	101	101	401	401	401	32B	101	32B

170 000 E

180 000 E

190 000 E

200 000 E

132° 00'

132° 10'

8 470 000 N

13° 50'

8 460 000 N

14° 00'

8 450 000 N

21179 21172 21184 21185 21186 21176 21175 21171 21181 21178 21177 21170 21182 21183 21180 21174 21173 21165 21166 21169 21156 21164 21167 21168 21159 21162 21163 21187 21158 21157 21198 21160 21161 21188 21189 21199 21197 Creek 21191 21195 21196 21190 21151 21200 21152 21194 21154 21153 21306 21193 Wandie 21155 21192 21108 21109 21110 21111 21107 21305 21140 21106 21104 21139 21103 21115 21102 21101 21112 21113 21114 21304 21119 21116 21117 21118 21120 21121 21122 21126 21127 21128 21303 21132 21125 FERGUSSON 21124 21123 21138 21150 21301 21302 21148 21147 21149 21146 21145 21144 RIVER 21141 21143 21142 21136 21138 21137 21133 21134 21135 21131 21130 21129

KM 2 0 2 4 6 KM

eupene exploration enterprises

Client : F.E. Henry, N.J. Walker, E.J. Bailey & J.G. Wright

Scale: 1:100000	Compiled: S.Hickey	Date: Nov. 1987
	Drawn: C.S.D.S.	

EL 4562

STREAM SEDIMENT SAMPLE SITES

Fig. 2

13°30'

132°00'

132°30'

13°30'

MARY RIVER

Frances Creek

Nellie Creek

Harriet Creek

Moline

McCarthy Hill

Wandie

STUART HIGHWAY

PINE CREEK

CULLEN RIVER

EL 4562

Wandie Creek

FERGUSSON RIVER

14°00'

132°00'

5 0 5 10 km

132°30'

14°00'

eupene exploration enterprises

Client : F.E.Henry, N.J.Walker, E.J.Bailey & J.G.Wright

Scale: 1:250000	Compiled: S.Hickey	Date: Nov. 1987
	Drawn: C.S.D.S.	

EL 4562

LOCATION MAP

Fig.1