



Normandy NFM Limited

N O R T H F L I N D E R S E X P L O R A T I O N

REPORT

ANNUAL AND FINAL REPORT FOR EL9086 (KUDU) FOR THE PERIOD 02/06/95 TO 01/06/99

BARROW CREEK DISTRICT, NORTHERN TERRITORY

1:250,000 SHEET REFERENCE: BARROW CREEK SE53-6

1:100,000 SHEET REFERENCE: TAYLOR 5755

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SUMMARY

This report describes the exploration activity and results obtained from EL9086 during the 4 years of tenure to 30 June 1999.

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Figure 2	Drillhole Location Map showing Locality, Access and First Relinquishment	1:30 000

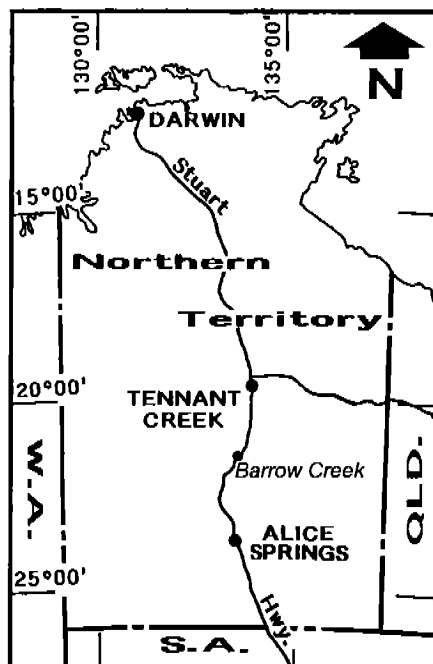
**Figures larger than A3 - folded into map wallet and attached to rear of report*

LIST OF APPENDICES

Appendix 1	Digital Data: EL9086.xls (EXCEL file on 3.5" disk) containing the following sheet names: EL9086 (drillhole and sample data, assays and logs) Header Descriptions Prospect Specific Headers Logging Codes Lab Tests (laboratory analytical techniques including detection limits)
Appendix 2	Sampling and Survey Methodology

1. INTRODUCTION

Exploration Licence 9086, which formed part of the Barrow Creek Group of tenements, was explored for "Granites" style and/or shear hosted gold/copper mineralisation. After four years of tenure, the licence has been surrendered.



2. TENEMENT DETAILS

EL9086, composed of 12 graticular blocks, was applied for and subsequently granted to Normandy on the 2nd June 1995. One statutory relinquishment has reduced the licence area to 6 blocks. As the licence fell within the Barrow Creek Joint Venture (BCJV) area of interest, the licence was included under the Joint Venture Agreement. Normandy NFM entered into, and became the operators of, the BCJV on the 1st of July 1998. The present breakdown between the JV partners is as follows:

Normandy Gold Pty Limited	42.5%
Normandy NFM Limited	42.5%
Yuendumu Mining Company	15%

After a review of the Barrow Creek project a decision was made to surrender EL9086. The EL contained historically non-prospective rocks and potential for significant mineralisation was viewed as being poor. As well as the perceived low prospectivity, the areas yet to have received exploration efforts are or are likely to be within AAPA (CLC) significant sites.

The licence was surrendered on 30th July 1999.

TABLE 1: Tenement Summary, EL9086 (Kudu)

	Date	Blocks	Km ²	Expiry
Grant:	02/06/95	12	39	01/06/01
First Relinquishment:	01/09/97	6	19	
Surrendered	30/07/99			

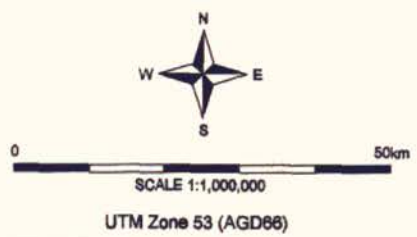
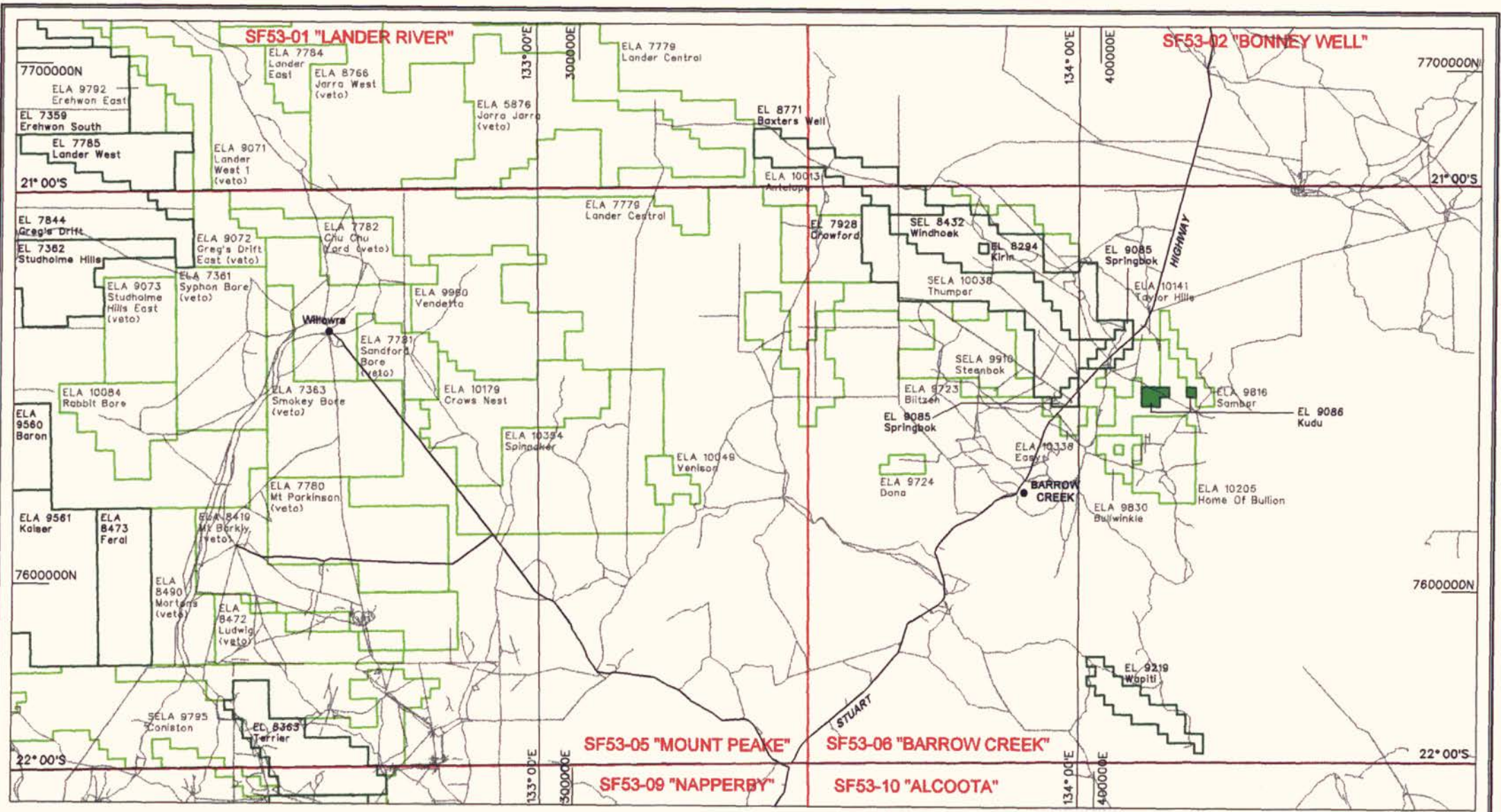
3. LOCATION, ACCESS AND PHYSIOGRAPHY

EL9086 is located approximately 200km south of Tennant Creek and 30km north east of the Barrow Creek Roadhouse (Figure 1). Access is gained via the Osborne Track.

The licence has steep outcrop hills and associated scree slopes and colluvial fans in the eastern portion, with sparse vegetation cover. Valley plain colluvial detritus and aeolian sands dominate the central and western portions of the licence, with medium to sparse gum, acacia and native grass the dominant vegetation.

4. PREVIOUS EXPLORATION BY OTHER COMPANIES

There is little evidence of past exploration within the area of interest. The only evidence of exploration within or adjacent to EL9086 is by the Allender et al. And Aberfoyle Resources Limited Joint Venture (EL6910). This group explored for Cu/Zn/Pb/Ag ± Au deposits similar to the mineralisation at the old Home of Bullion Mine. Exploration activity undertaken by Allender et al and Aberfoyle Resources Limited Joint Venture comprised geological compilation, airborne magnetic survey, geomagnetic mapping (Allender and Drown, 1992) and GEOTEM survey (Walker and Drown, 1993). The area was not considered prospective and subsequently relinquished in 1992 and 1993.




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TENEMENT LOCATION PLAN

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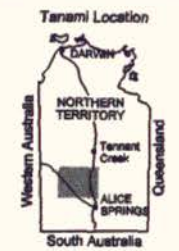


FIGURE 1

5. GEOLOGY

5.1 Regional Geology

The oldest exposed basement in central Australia comprises metamorphic and igneous rocks of the Arunta Inlier (Haines et al., 1991). Rocks of the Arunta Inlier are interpreted as being at least partly correlative with sedimentary and volcanic sequences of the adjacent Tennant Creek and Granites-Tanami Inliers.

The Arunta Inlier (Early-Middle Proterozoic) is characterised by metamorphosed sedimentary and igneous rocks of low to medium pressure facies. Deformation and regional metamorphism to upper greenschist facies took place between 1810-1750 Ma (Black, 1981). Shaw and Stewart (1975) established three broad stratigraphic subdivisions based on facies assemblages and lithological correlations. From oldest to youngest, these subdivisions are named Division 1, 2 and 3. Using this model defined by Shaw and Stewart (1975), the orthogneiss east of Osborne Range, the calc-silicate rocks west of Crawford Range and the Bullion Schist would be included in Division 2, and the Ledan Schist in Division 3 of the Arunta Inlier.

Unconformably overlying these rocks are the Hatches Creek Group sediments and volcanics. Blake et al. (1987) formally subdivided the Group into the Ooradidgee, Wauchope and Hanlon Subgroups, comprising a total of 20 Formations and two Members. The Hatches Creek Group is a folded sequence of shallow-water sediments with interbedded volcanic units that reach thicknesses of at least 10,000 metres.

The sediments include ridge-forming quartzites, feldspathic, lithic and minor conglomeratic arenites and friable arenite, siltstone, shale and carbonate. The Ooradidgee Subgroup consists mainly of fluvial sediments and sub-aerial volcanics which partly interfinger. The Wauchope Subgroup is characterised by large volumes of volcanics and sediments probably both marine and fluvial in origin. The Hanlon Subgroup may be entirely marine and lacks volcanics (Blake et al., 1987).

Deformation and regional metamorphism took place between 1810-1750 Ma (Black, 1981). Folding was about NW trending axes while metamorphism to upper greenschist facies took place. Later intrusion of both the Arunta basement and the Hatches Creek Group by granitoids of the Barrow Creek Granitic Complex took place around 1660 Ma (Blake et al., 1987). Contact metamorphism and metasomatism are often observed.

Sedimentation associated with the Georgina Basin commenced during the Late Proterozoic with the Amesbury Quartzite and was terminated during the Early Devonian after deposition of the Dulcie Sandstone. The Georgina Basin sequence was mildly affected by the Carboniferous Alice Springs Orogeny.

A long erosional period followed with subsequent deep weathering during the Tertiary produced silcrete and ferricrete horizons. A veneer of Quaternary sands and soils overlays much of the area, except where recent and active alluvial sedimentation is present.

5.2 Prospect Geology

Quaternary sediments, especially in the western half, cover the majority of the licence area. Alluvial sands, gravels and/or aeolian sands are the more common Quaternary deposits; red earth soils, commonly with ferruginous pisoliths and characterised by stands of mulgas are also recognised. The eastern portion of EL9086 is represented by Strzelecki Volcanics and Illoquara Sandstone (Hatches Creek Group, Wauchope Subgroup) forming the Osborne Range (West 1997a).

6. WORK UNDERTAKEN DURING THE FOURTH YEAR OF TENURE TO 1/6/99

No in-ground fieldwork was conducted within EL9086 during the fourth year of tenure. This was to some extent a result of significant reductions to the exploration budgets associated with the prevailing health of the gold industry and the need to rank the prospectivity of tenements. A comprehensive tenement evaluation and comparative ranking of all tenements within the BCJV was undertaken after Normandy NFM assumed operational management. The lack of significant results to date, combined with the relatively small area that remained to be tested, downgraded its relative ranking compared to other tenements within the BCJV. EL9086 was subsequently surrendered.

Proposed work for the period had included testing the remaining blocks for anomalous geochemistry by widely spaced vacuum or RAB holes.

7. WORK UNDERTAKEN DURING THE THREE YEARS OF TENURE FROM 2/6/95 TO 1/6/98

7.1 Year 1

Exploration during the first year of tenure involved a full assessment of all available past exploration records pertaining to EL9086. Records included:

- MR aeromagnetic survey
- Northern Territory Geological Survey
- Allender et al. Aberfoyle Resources Limited Joint Venture Report on Exploration

A geological map was generated from past exploration results and is provided as Figure 2 in Mouchet P.O.J., 1996.

Field reconnaissance work was carried out.

7.2 Year 2

Exploration during the second year of tenure included field mapping associated with the compilation of a Regolith Map, refer Figure 8 (West, 1997). The result of this mapping suggested that vacuum drilling would be a suitable method for determining bedrock lithologies and geochemistry beneath the dominant valley plain colluvial detritus.

7.2.1 Vacuum Drilling

A vacuum drilling program totalling 728m was carried out over approximately 50% of the available licence area (40% of the licence is under AAPA exclusion). A total of 110 holes were drilled along lines spaced 800m apart and hole spacings of 100-200m (Figure 2).

Samples were taken as a composite of the lowest 3m of the hole in bedrock (BOH average of 7m). Samples were sent to Australian Laboratory Services in Alice Springs for sample preparation, then to ALS Townsville for ZARG analysis.

TABLE 2: Vacuum Drillhole Details

Drillholes	Total	Sample Numbers	ALS Method	Elements Analysed
KUV001-KUV110	110	822847-822956	PM225 IC558 IC225	Au As, Cu, Bi, Ag, Pb, Zn Fe

Results revealed the area drilled to be dominated by granites with silcrete and siltstones along the northeast boundary, refer Figure 3 (West, 1997). The highest analyses returned were arsenic values of 34.5ppm As (KUV051) and 13.8ppm As (KUV047). The highest zinc value was 208.7ppm from (KUV025).

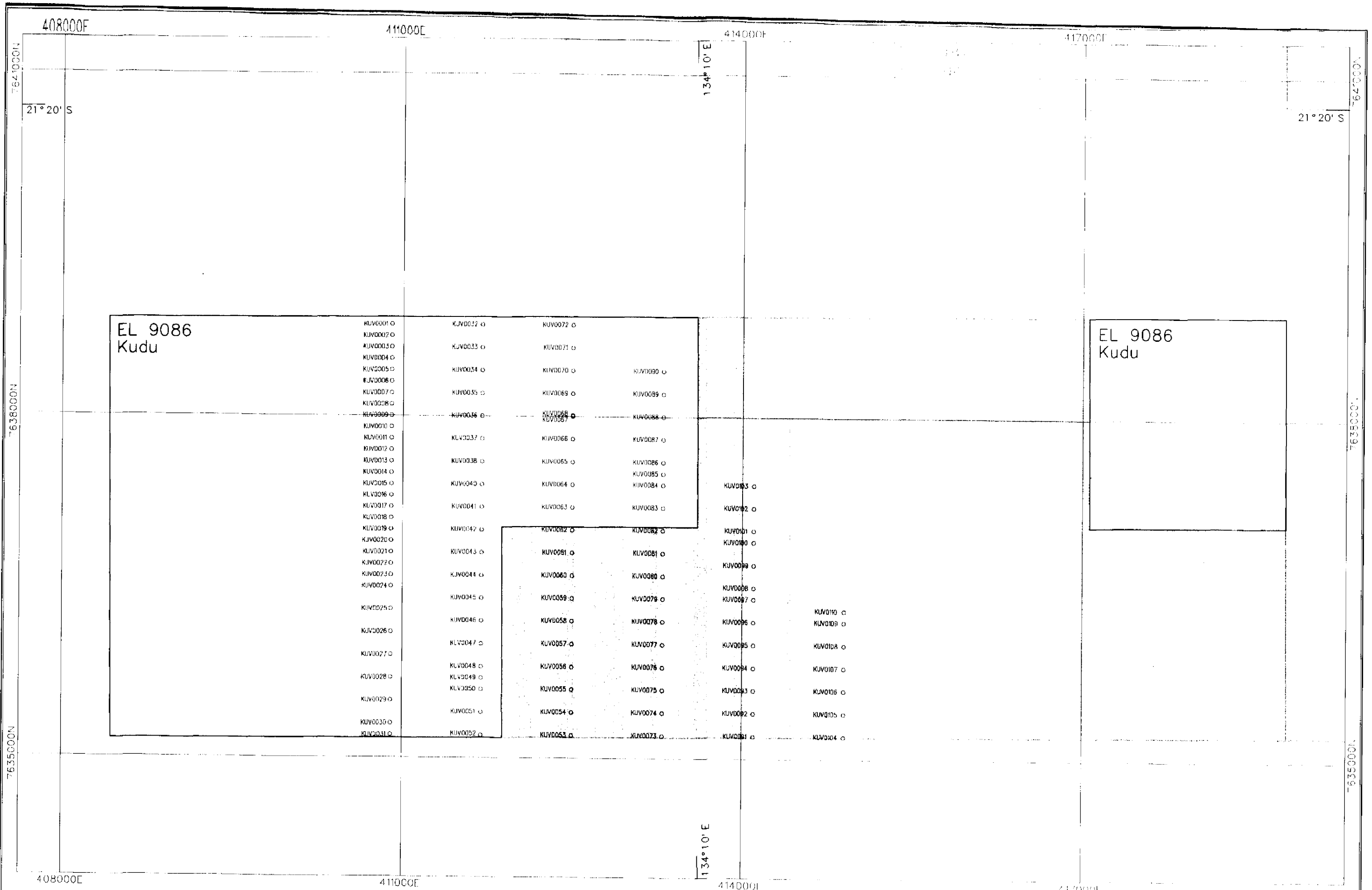
Complete assay records and sample descriptions are included in Appendix 1. Graphic results for Au, Cu, Bi and Zn are displayed on Figures 4-7 (West, 1997).

7.3 Year 3


The first relinquishment for EL9086 resulting in the reduction of 6 blocks was effected from September 1997. Blocks from the central region of the tenement were relinquished resulting in the tenement split into 2 areas. The western component comprising 5 blocks and the eastern comprising 1 block. The reader is referred to First Relinquishment Report (West, 1997).

Work carried out during the third year of tenure was restricted to the compilation, interpretation and review of previous geological, geophysical and geochemical data. The review revealed that the licence is situated within a highly prospective tectonostratigraphic corridor. In the area of the licence the influence of high strain and granitoid emplacement has resulted in a complex structural geometry.

Vacuum drilling in the far northeastern block was unable to be carried out due to the AAPA exclusion.



Blocks relinquished (1 September 1997)

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Vacuum Drillhole Location Diagram showing Locality, Access and First Relinquishment Area

UTM Zone 53 (AGD66)

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8. EXPENDITURE INCURRED FOR THE REPORTING PERIOD

A summary of exploration expenditure for the four years of tenure is tabled below. A breakdown of costs for the fourth year of tenure is outlined in Table 3.

TABLE 2: Summary of Exploration Expenditure for EL9086

EL9086	Covenant (\$)	Expenditure (\$)
Year 1 2/6/95 - 1/6/96	21 000	2 994
Year 2 2/6/96 - 1/6/97	16 500	19 007
Year 3 2/6/97 - 1/6/98	9 000	7 361
Year 4 2/6/98 - 1/6/99	9 000	7 255

TABLE 3: Details of Exploration Expenditure for the Period 2/6/98 to 1/6/99

COST CENTRE	EL9086 TOTAL (\$)
Regional Office Costs	1 210
Salaries and Wages	5 784
Field Costs	261
TOTAL	\$7 255
COVENANT	\$9,000

9. REFERENCE LIST / ANNUAL REPORT BIBLIOGRAPHY

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APPENDIX 1 – DIGITAL DATA

APPENDIX 2 - SAMPLING METHODS AND ANALYTICAL TECHNIQUES

VACUUM DRILL SAMPLES

LAG/DSL (Drill-derived Stone Line)

Lag is any hard residual surficial material varying from a coarse sand to rock fragments.

The sample is obtained via a shallow surface scrape, sieved to obtain approximately 250g of material and collected into a plastic zip seal bag. The size of the sieved fraction, which is variable from project to project, is listed in the sample logs.

Reconnaissance spaced sample sites are not marked, however infill sample sites are flagged in the absence of a local grid. Sample type, quality, description and size is noted at the time of collection and recorded via codes outlined in Appendix 2.

The samples are submitted for multielement analysis to provide a screen for other mineralisation styles.

A **DSL** sample is a drill derived "buried" lag sample. Other than using a drill rig to bring the sample to surface, collection methods are identical to lag.

VACUUM DRILLING

Vacuum drilling is undertaken by Normandy NFM using EDSON 200 series vacuum drill rigs. All holes are plugged below ground and are only marked if positioned on an established grid.

DSL Samples

As described above. The sample is sieved to a -5mm +2mm fraction and approximately 250g is collected into a plastic zip seal bag.

Vac/BOH Samples

The sample is collected in a perspex tube in which relative down hole depth proportions are retained. The geologist may choose to sample a particular horizon of interest as a selected sample or collect a composite sample. For this reason, sample intervals are variable. Specific sample intervals are listed in the drillhole logs.