POSEIDON GOLD LIMITED

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ANNUAL REPORT

FOR EXPLORATION LICENCE 7777

FOR THE PERIOD 14/8/93 TO 13/8/94

BARROW CREEK DISTRICT, NORTHERN TERRITORY

PAUPERS WELL PROSPECT

MT PEAKE 1:250,000 SHEET SF 53-5

VOLUME 1 OF 1

AUTHOR: J KUONI
EXPLORATION GEOLOGIST

DATE: SEPTEMBER 1994

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CR94/793 VOL 1

Tennant Creek Library: 94152/28/0302 **Report No.** **13504**

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COMMODITIES: GOLD

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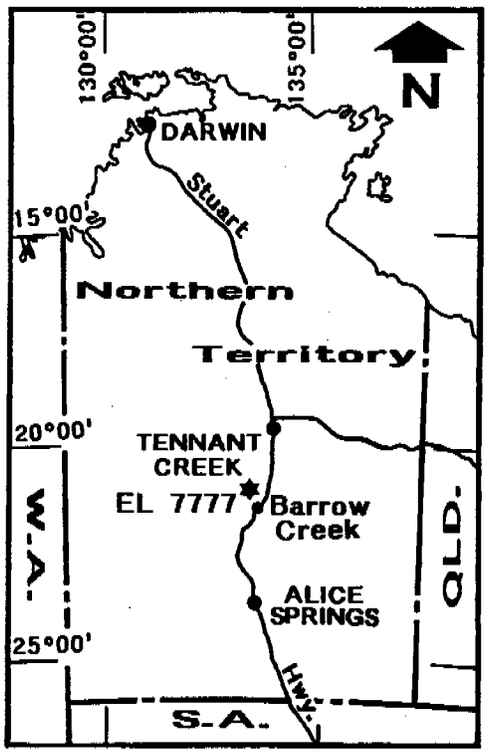
2	Bibliographic Data Sheet

REPORT NO: 13504
TITLE: ANNUAL REPORT FOR EXPLORATION LICENCE 7777 FOR THE PERIOD 14/8/93 TO 13/8/94, BARROW CREEK DISTRICT, NORTHERN TERRITORY, PAUPERS WELL PROSPECT
AUTHOR: J KUONI
DATE: SEPTEMBER 1994



1. SUMMARY

Exploration Licence 7777 forms part of the Barrow Creek group of tenements and is being explored for "Granites" style and/or shear hosted gold mineralisation. The licence is approaching its third year of tenure under a joint venture agreement between Poseidon Gold Limited (PosGold), Normandy Exploration (Norex) and Yuendumu Mining Company (YMC).

In the 12 month period an exploration programme involving bedrock-palaeosol vacuum drilling and a soil geochemical orientation survey was completed over the licence area.

2. INTRODUCTION

The area covered by the Barrow Creek Joint Venture (BCJV) located approximately 200 kilometres south of Tennant Creek, is currently being explored for "Granites" style and/or shear hosted economic mineralisation. Exploration Licence 7777, situated on the western edge of the group of tenements, comprises 117 graticular blocks and was granted on 14 August 1992.

Exploration carried out on EL 7777 by PosGold on behalf of the BCJV has included vacuum drilling and a soil geochemical orientation survey, refer Table 1.

TABLE 1

SUMMARY WORK STATISTICS FOR EL 7777 FOR THE PERIOD 14/8/93 TO 13/8/94

Vacuum Drilling	344m (56 holes)
Orientation Soil Samples	10

2.1 Location and Access

Exploration Licence 7777 is located on Stirling Station, 60km NW of the Barrow Creek Hotel. Access is via several station tracks intersecting the Stuart Highway opposite Barrow Creek, refer Figure 1.

2.2 Tenement Status

Exploration Licence 7777, measuring 117 graticular blocks, was applied for and subsequently granted to PosGold on 14 August 1992. A deferral of the 50% reduction due at the completion of year two of tenure, was applied for on 13 July 1994.

2.3 Previous Exploration

No record of previous exploration is known within the current licence area.

East of EL 7777, a series of shallow pits expose weakly mineralised Au-Cu sheeted quartz veins at the Petricks Prospect. Other small workings for Sn, W, Ta and Mica occur throughout the general region.

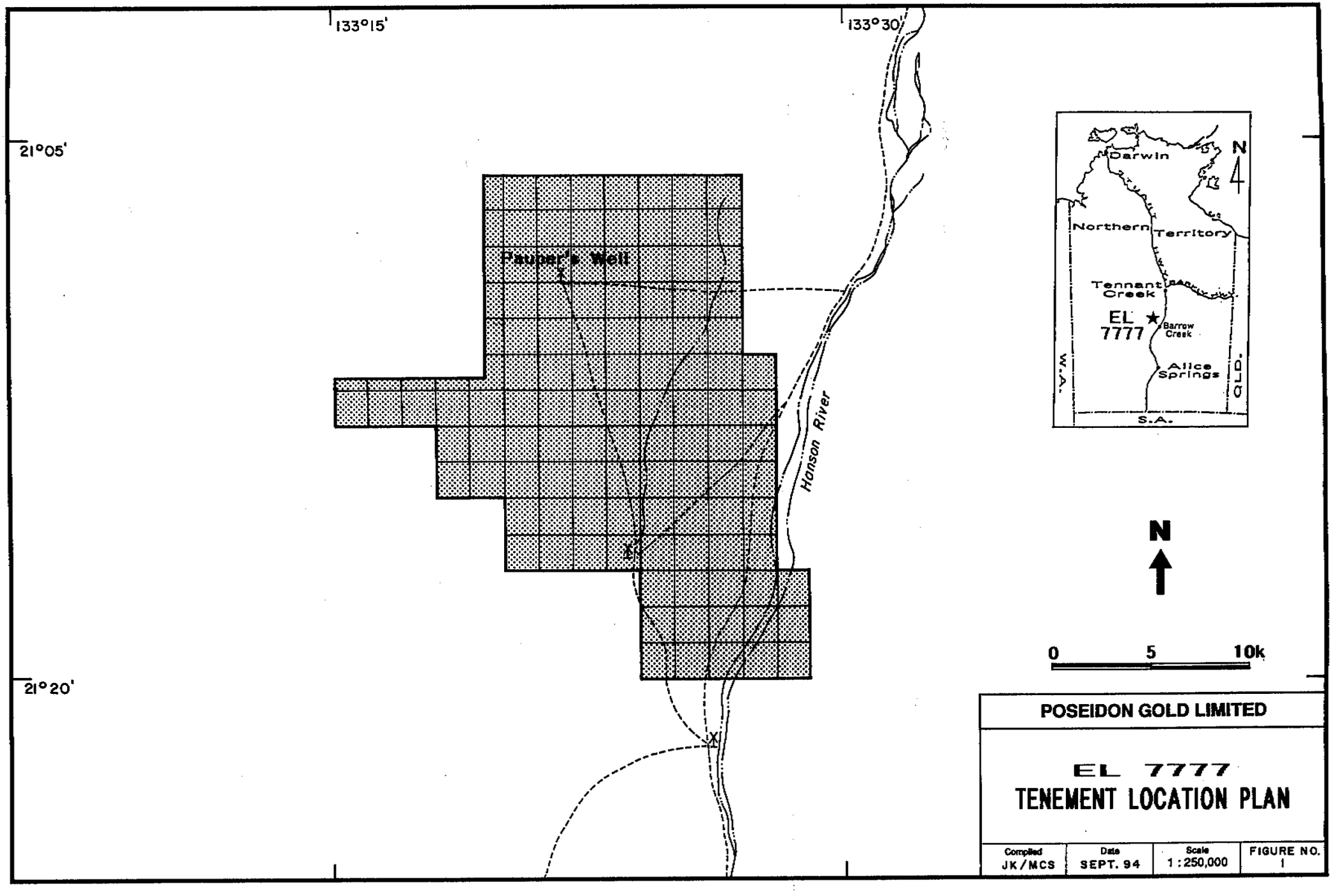
Kewanee Australia Pty Ltd undertook a broad exploration programme between 1970-74 within the Crawford-Osborne Range area. Several targets were delineated by a combination of airborne magnetics, radiometrics and EM survey techniques. Targets generated by this method were followed up with geological mapping, sampling and a combination of percussion, reverse circulation and diamond drilling. This work delineated a sub-economic Cu-Ni resource (Prospect D), but grade was considered too low to warrant further investigation, and the ground was relinquished in 1973.

Limited exploration was conducted by Australus Mining Co Pty Ltd during 1969, for base metal potential in the Crawford Range area. Pegmatites, granites and metadolerites were targeted with disappointing results.

3. GEOLOGICAL SETTING

3.1 Regional Geology

The oldest rocks in the licence area are mica-quartz ± sericite schists of the Lander Rock Beds, interpreted as equivalent to the Bullion


133°15'
133°30'
21°05'
21°20'
Pauper's Well
Hanson River
Darwin
Northern Territory
Tennant Creek
EL 7777
Barrow Creek
Alice Springs
W.A.
S.A.
QLD.
N
0
5
10k
POSEIDON GOLD LIMITED
EL 7777
TENEMENT LOCATION PLAN
Compiled JK/MCS
Date SEPT. 94
Scale 1:250,000
FIGURE NO. 1

Schist Formation in the east. Deformation and regional metamorphism to upper greenschist facies took place between 1810-1750 Ma (Black, 1981) and subsequent intrusion of mafic igneous rocks took place.

Unconformably overlying the Lander Rock Beds are the Lower Proterozoic Reynolds Range Group comprising shallow marine sediments. This group in turn is overlain by sediments of the Vaughan Springs Quartzite and Central Mount Stuart Formation.

Following deposition, the entire sequence was folded about NW trending axes and metamorphosed to zeolite facies.

A long erosional period followed with subsequent weathering during the Tertiary to produce silcrete and ferricrete horizons. A thin veneer of Quaternary sands and soils overlays the area.

3.2 Local Geology

The majority of the licence area is covered by residual soils and aeolian sands of variable thickness. Outcrop exposure is restricted to two north-east trending arcruate quartz ridges, located within the western portion of the lease.

4. EXPLORATION PROGRAMME FOR THE PERIOD 14/8/93 TO 13/8/94

4.1 Vacuum Drilling

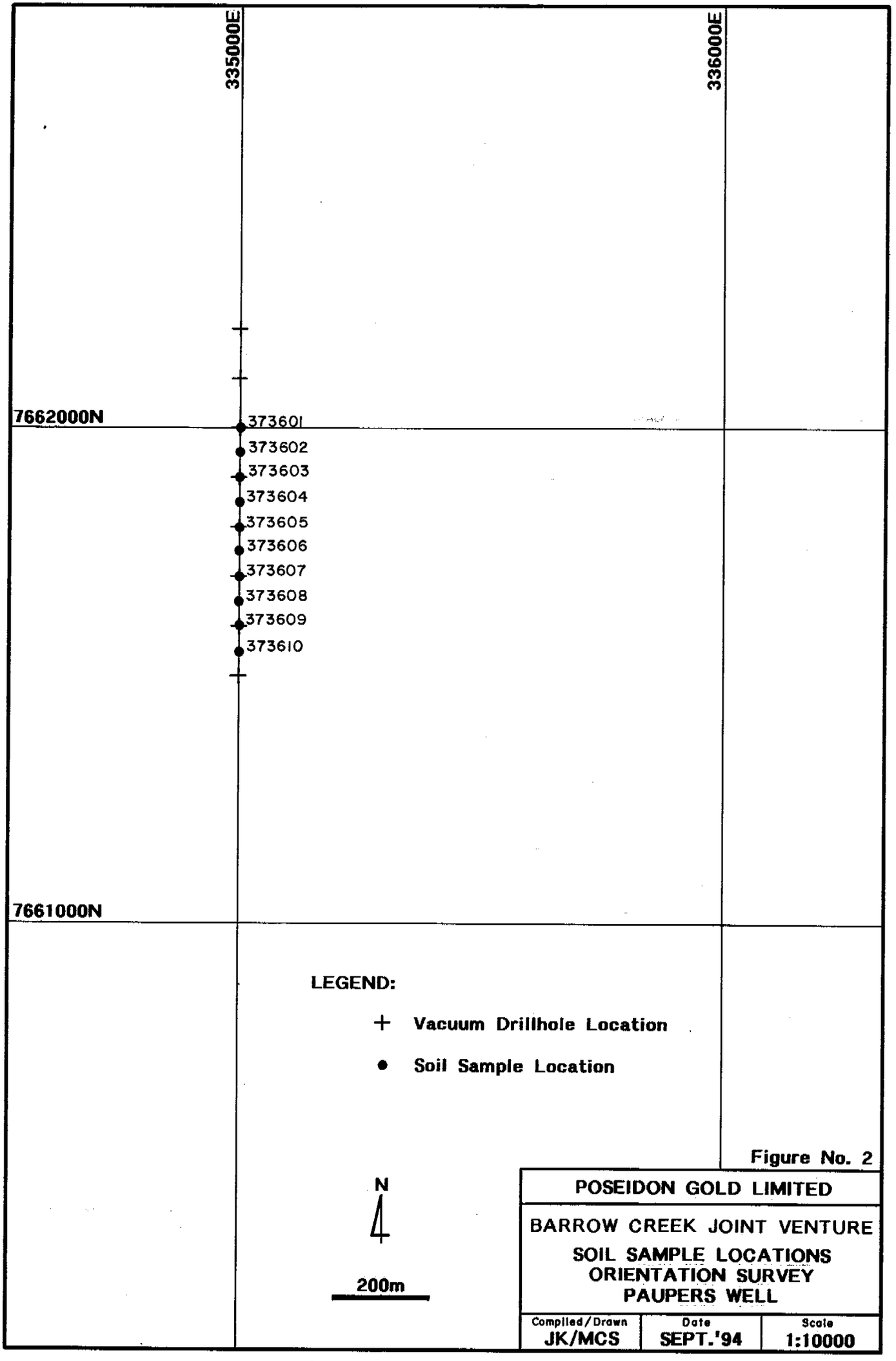
Four vacuum drillhole traverses were completed over the Paupers Well area, totaling 56 holes for 344 metres. Drilling was designed to test several low order gold responses up to 2 ppb obtained through regional soil sampling in year one of tenure. Holes were spaced at 100 metre intervals along each line, and were drilled to an average depth of 6 metres. The dominant lithotype intersected was a strongly limonitic schist, cut by massive quartz veins and minor pegmatites. Up to five metres of sand and soil cover was encountered in the drilling.

Both bedrock and palaeosol samples were collected and despatched to Australian Laboratory Services (Alice Springs) for low level gold-arsenic-base metal analysis.

Results were generally below detection, with peak values of 4 ppb and 2 ppb Au in the bedrock. Arsenic values were below 10 ppm. Plans 1-4 show bedrock geology and assay results, Appendix 1 lists the geochemical data.

4.2 Soil Orientation Survey

Due to the thick surficial cover encountered on the licence, an orientation soil survey was completed to determine the optimum size fraction for ongoing soil sampling in the region. A total of 10 soil samples were collected along the eastern most vacuum line (335000 east) in the Exploration Licence, refer Figure 2. The samples were collected at 50 metre spacings as 10kg bulk samples and despatched to Normandy Poseidon Laboratories (Perth). Results are still awaiting.


335000E
336000E
7662000N
7661000N
373601
373602
373603
373604
373605
373606
373607
373608
373609
373610
LEGEND:
Vacuum Drillhole Location
Soil Sample Location
N
200m
Figure No. 2
POSEIDON GOLD LIMITED
BARROW CREEK JOINT VENTURE
SOIL SAMPLE LOCATIONS
ORIENTATION SURVEY
PAUPERS WELL
Compiled/Drawn
JK/MCS
Date
SEPT.'94
Scale
1:10000

5. EXPLORATION EXPENDITURE FOR THE PERIOD 14/8/93 TO 13/8/94

The exploration expenditure for the 12 month period for EL 7777 is outlined in Table 2 below:

TABLE 2

EXPLORATION EXPENDITURE FOR EL 7777 FROM 14/8/93 TO 13/8/94

EXPENSE		COST
Employee Costs	$	7,525
Overheads	$	2,181
Drilling Costs	$	8,000
Assays	$	5,000
Operating Costs	$	5,264
Specialist Services	$	238
Tenement Management	$	2,405
Research	$	34
TOTAL	$	30,647
Covenant	$	20,000

6. PROPOSED EXPLORATION EXPENDITURE (14/8/94 TO 13/8/95)

Exploration over EL 7777 during the next 12 months will involve further regional soil geochemistry in previously untested areas underlain by prospective Lander Rock Beds. The nature of geochemical testing will be based on results of the orientation survey over the licence area.

Follow up vacuum drilling is also proposed, dependent on results from the soil sampling programme.

A summary of proposed expenditure is outlined below:

EXPENSE		COST
Employee Costs	$	4,000
Overheads	$	2,500
Drilling Costs	$	2,000
Assays	$	5,000
Operating Costs	$	4,000
Specialist Services	$	2,500
TOTAL	$	20,000

7. REFERENCES

Black, L P,1981:

Age of the Warramunga Group, Tennant Creek Block, Northern Territory, BMR Journal of Australian Geology and Geophysics,, 6, 253-257.

APPENDIX ONE

VACUUM LITHOLOGIES AND ASSAY DATA

AU ppb
AS ppm
CU ppm
PB ppm
ZN ppm
AG ppm
NI ppm
FE %
MN ppm
CR ppm
CO ppm
CD ppm

PEG	pegmatite
S	schist
b	biotite
m	muscovite
q	quartz
li	limonite staining
h	haematite staining
s	sericite
Si	silicification
V	veining

EL - 7777 VACUUM BEDROCK LITHOLOGY AND ASSAY DATA

BHID	EASTING	NORTHING	SNN	LITHO	AU	AS
PWV-001	327500	7658100	371363	PEG	1	2
PWV-002	327500	7658200	371364	S/bmv	1	1
PWV-003	327500	7658300	371365	S/Si	1	1
PWV-004	327500	7658400	371366	S/Si/qV	1	1
PWV-005	327500	7658500	371367	S/s	1	1
PWV-006	327500	7658600	371368	S/b	1	TR
PWV-007	327500	7658700	371369	S	1	TR
PWV-008	327500	7658800	371370	qV	1	1
PWV-009	327500	7658900	371371	S/qV	1	TR
PWV-010	327500	7659000	371372	S	1	TR
PWV-011	327500	7659100	371373	S	1	1
PWV-012	327500	7659200	371374	S/qli	1	TR
PWV-013	327500	7659300	371375	S/qli	1	TR
PWV-014	327500	7659400	371376	S/li	1	2
PWV-015	327500	7659500	371377	S/liq	1	1
PWV-016	327500	7659600	371378	S/h	1	1
PWV-017	331000	7660100	371379	S/li	1	1
PWV-018	331000	7660200	371380	S/li	1	1
PWV-019	331000	7660300	371381	S/s	1	TR
PWV-020	331000	7660400	371382	qV	1	1
PWV-021	331000	7660500	371383	S/b	1	2
PWV-022	331000	7660600	371384	S/li	1	2
PWV-023	331000	7660700	371385	S/h	1	3
PWV-024	331000	7660800	371386	S/liqV	1	2
PWV-025	331000	7660900	371387	PEG	1	TR
PWV-026	331000	7661000	371388	S/h	1	1
PWV-027	331000	7661100	371389	S/h	1	2
PWV-028	331000	7661200	371390	?PEG	1	2
PWV-029	331000	7661300	371391	?PEG	1	2
PWV-030	331000	7661400	371392	S/s	1	1
PWV-031	331000	7661500	371393	?PEG	1	2
PWV-032	331000	7661600	371394	S	1	3
PWV-033	333000	7660500	371395	?NBR	1	5
PWV-034	333000	7660600	371396	S	1	2
PWV-035	333000	7660700	371397	S/li	1	3
PWV-036	333000	7660800	371398	S/qV	1	4
PWV-037	333000	7660900	371399	S	1	3
PWV-038	333000	7661000	371400	S	1	2
PWV-039	333000	7661100	371401	S	1	4
PWV-040	333000	7661200	371402	S/h	1	3
PWV-041	333000	7661300	371403	S/q	1	3
PWV-042	333000	7661400	371404	S	1	4
PWV-043	333000	7661500	371405	S/hqV	1	3
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PWV-046	333000	7661800	371408	PEG	1	3
PWV-047	333000	7661900	371409	S	1	2
PWV-048	333000	7662000	371410	S	1	3
PWV-049	335000	7662000	371411	S	1	2
PWV-050	335000	7662100	371412	S	1	3
PWV-051	335000	7662200	371413	?NBR	1	2
PWV-052	335000	7661900	371414	S/liqV	1	2
PWV-053	335000	7661800	371415	S/h	4	2
PWV-054	335000	7661700	371416	S/h	1	3
PWV-055	335000	7661600	371417	S	1	3
PWV-056	335000	7661500	371418	S	1	4

EL - 7777 VACUUM BEDROCK LITHOLOGY AND ASSAY DATA

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6	9	16	TR	8	3	81	16	TR	TR
6	7	19	TR	9	2	91	15	TR	TR
7	8	22	TR	10	2	179	17	5	TR
11	8	26	TR	12	3	157	7	5	TR
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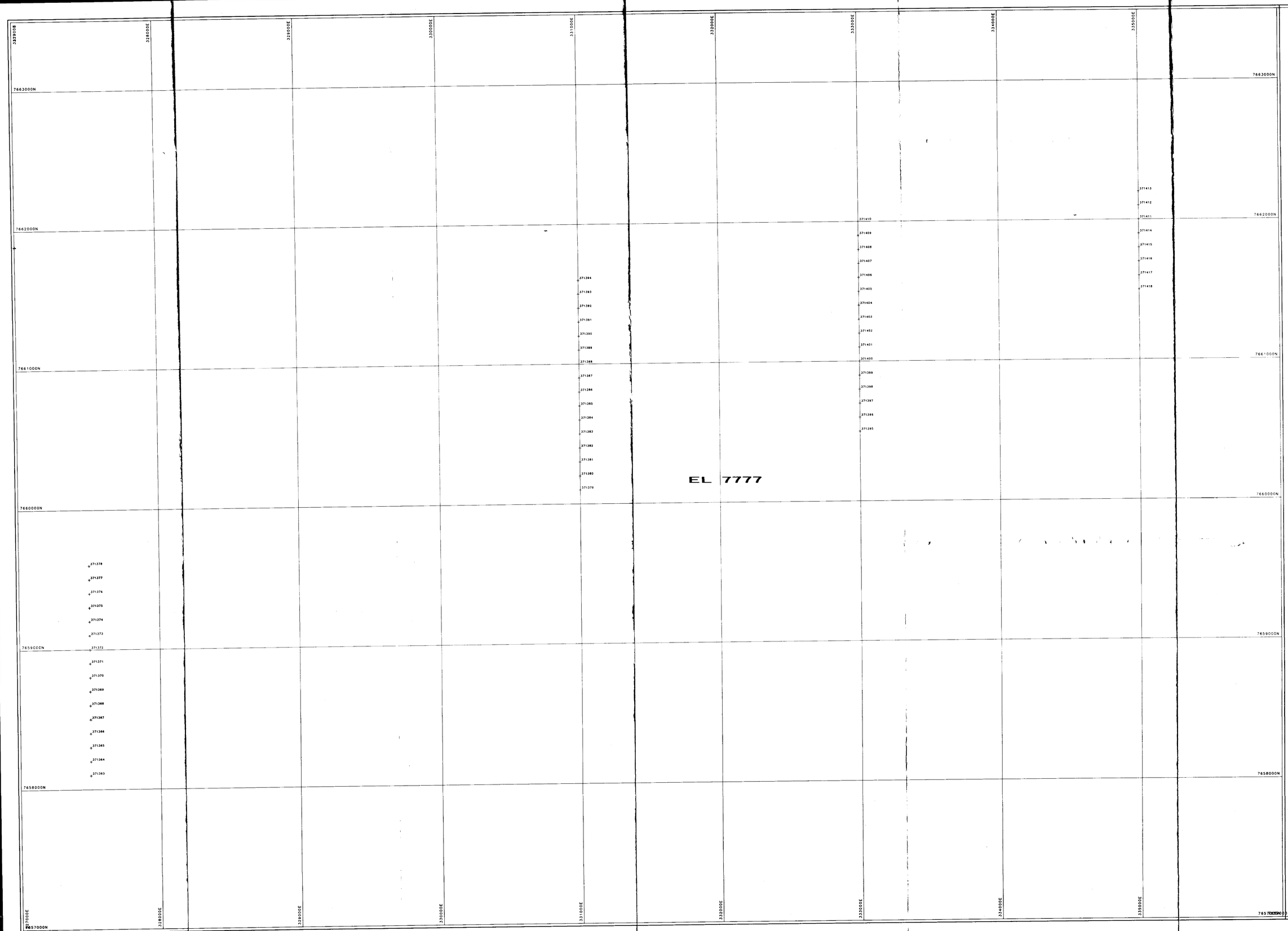
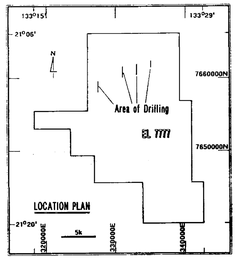
APPENDIX TWO

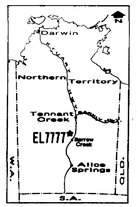
BIBLIOGRAPHICAL DATA SHEET

BIBLIOGRAPHIC DATA-SHEET

REPORT NUMBER	13504
REPORT NAME	ANNUAL REPORT FOR EXPLORATION LICENCE 7777 FOR THE PERIOD 14/8/93 TO 13/8/94, BARROW CREEK DISTRICT, NORTHERN TERRITORY, PAUPERS WELL PROSPECT
PROSPECT NAME(S)	EL 7777 PAUPERS WELL PROSPECT
OWNER/JV PARTNERS	POSEIDON GOLD LIMITED NORMANDY EXPLORATION YUENDUMU MINING COMPANY
KEYWORDS	LANDER ROCK BEDS SOIL GEOCHEMISTRY VACUUM DRILLING
COMMODITIES	GOLD
TECTONIC UNIT	LANDER ROCK BEDS
1:250,000 MAP SHEET	MT PEAKE SF 53-5
1:100,000 MAP SHEET	UNAVAILABLE







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200m

Plan No. 1

POSEIDON GOLD LIMITED

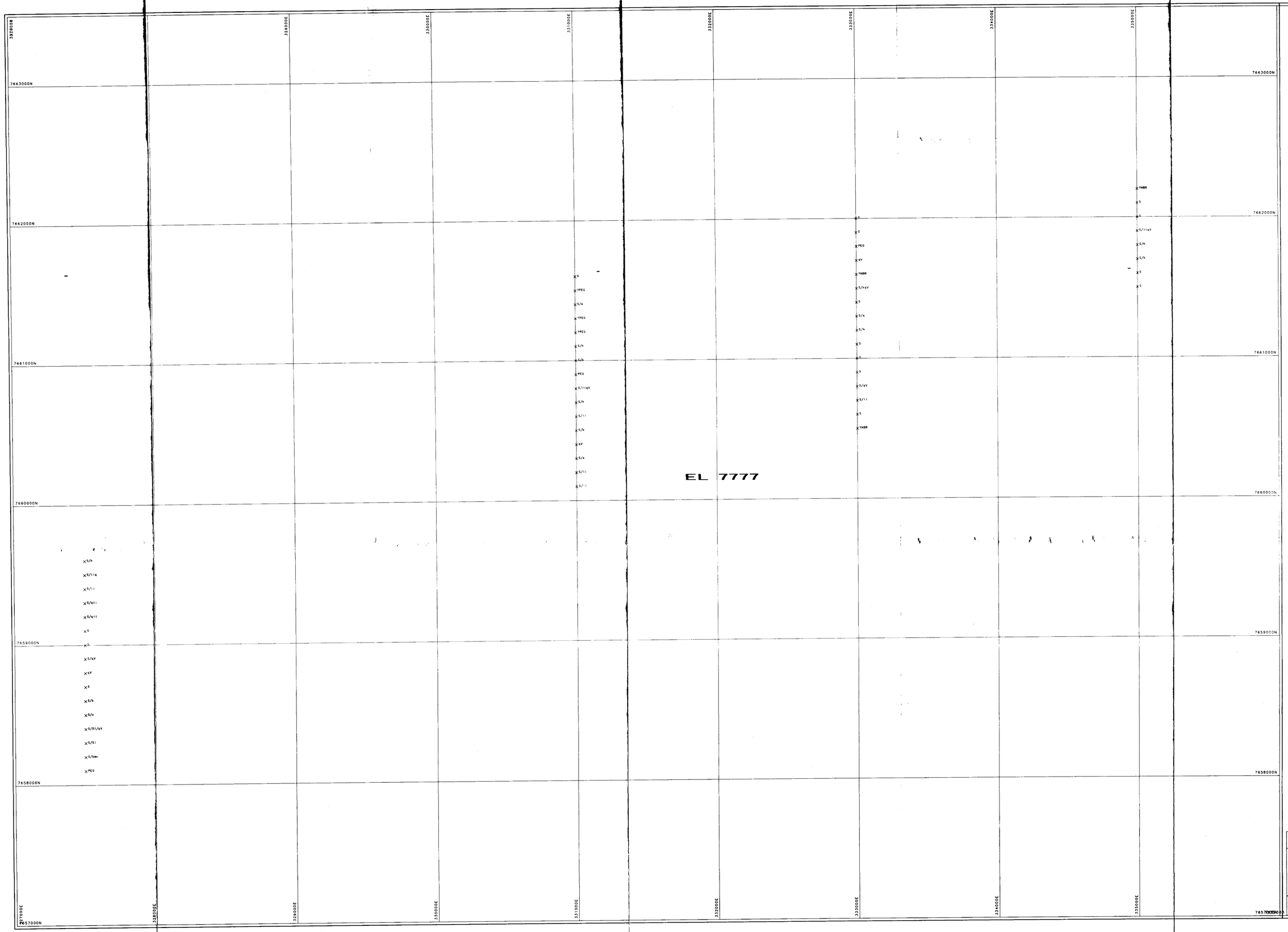
BARROW CREEK JOINT VENTURE

VACUUM SAMPLE NUMBER LOCATIONS

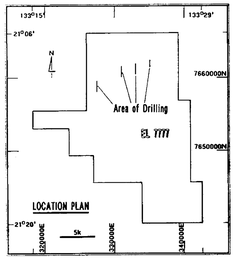
PAUPERS WELL AREA

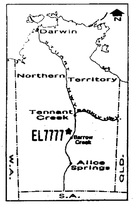
SCALE	DRAWN	DATE	CHECKED
1:10000	DATAMINE	19 AUG 94	JK

Tennant Creek Library: 94152/28/0302



See Appendix 1 for Lithological Legend





N

200m

Plan No. 2

POSEIDON GOLD LIMITED

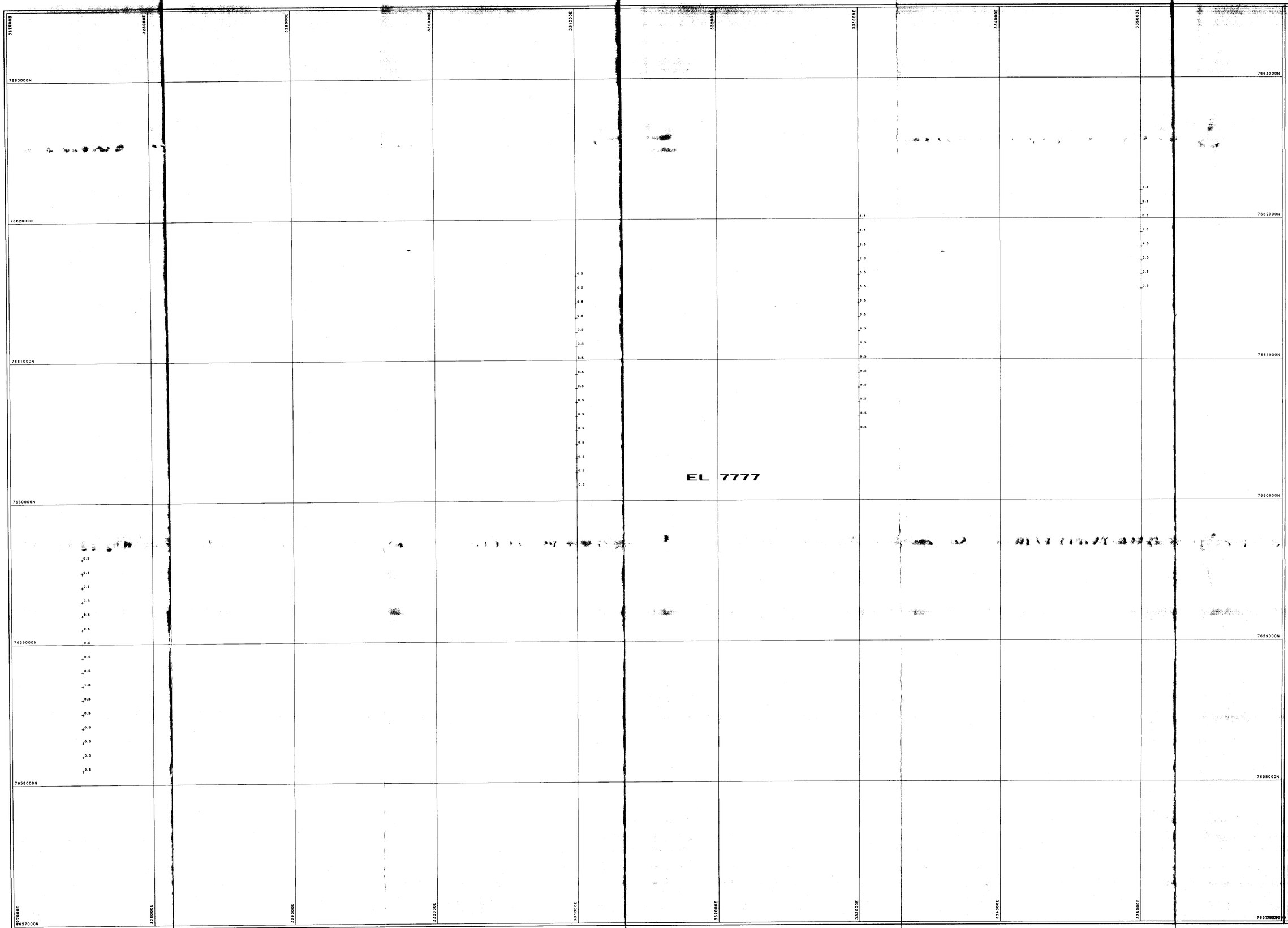
BARROW CREEK JOINT VENTURE

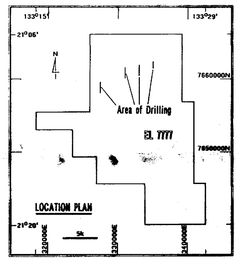
VACUUM BEDROCK LITHOLOGY

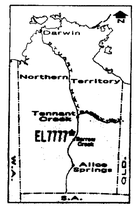
PAUPERS WELL AREA

SCALE	DRAWN	DATE	CHECKED
1:10000	DATAMINE	19 AUG 94	JK

Tennant Creek Library: 94152/28/0302







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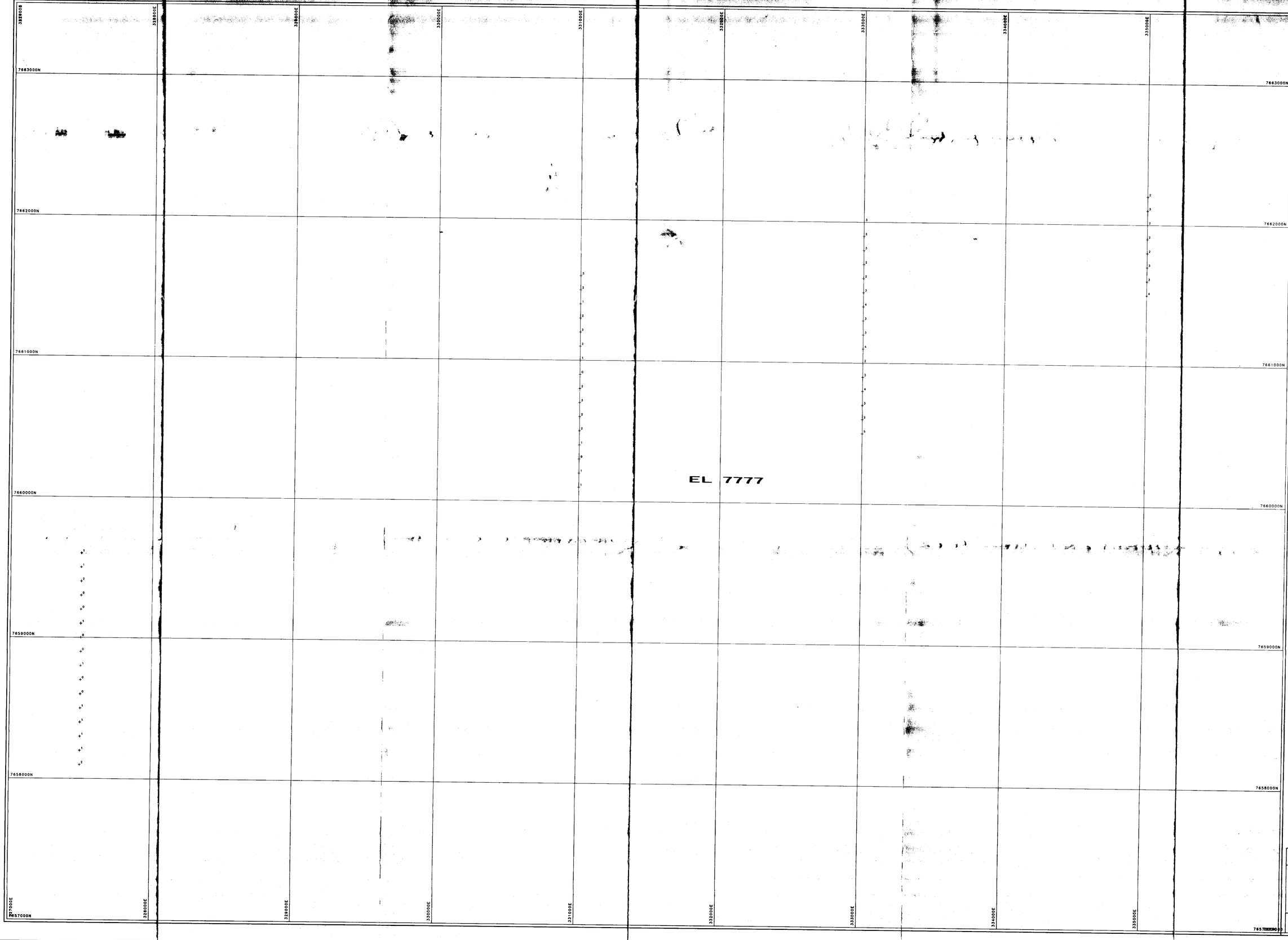
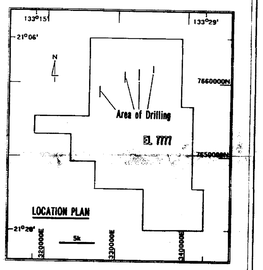
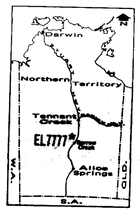
Plan No. 3

POSEIDON GOLD LIMITED			
BARROW CREEK JOINT VENTURE			
VACUUM AU ASSAYS - (ppb)			
PAUPERS WELL AREA			
SCALE	DRAWN	DATE	CHECKED
1:10000	DATAMINE	19 AUG 94	JK

Tennant Creek Library: 94152/28/0302







N

Plan No. 4

POSEIDON GOLD LIMITED

BARROW CREEK JOINT VENTURE

VACUUM AS ASSAYS – (ppm)

PAUPERS WELL AREA

SCALE	DRAWN	DATE	CHECKED
1:10000	DATAMINE	19 AUG 94	JK

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