POSEIDON GOLD LIMITED

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A PosGold Company

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ANNUAL REPORT

FOR EXPLORATION LICENCE 7898

FOR THE PERIOD 5/2/93 TO 4/2/94

TENNANT CREEK DISTRICT, NORTHERN TERRITORY

FLYNN PROSPECT

TENNANT CREEK 1:250,000 SHEET SE 53-14

VOLUME 1 OF 1

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EXPLORATION GEOLOGISTS

DATE: MARCH 1994

AUTHORISED BY: J W J Davenport

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Tennant Creek Library: 94021/28/0306 **Report No.** 11785

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COMMODITIES: Gold, Copper

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TITLE: ANNUAL REPORT FOR EXPLORATION LICENCE 7898 FOR THE PERIOD 5/2/93 TO 4/2/94, TENNANT CREEK DISTRICT, NORTHERN TERRITORY, FLYNN PROSPECT
AUTHOR: T J HUNTER / G M LOWE
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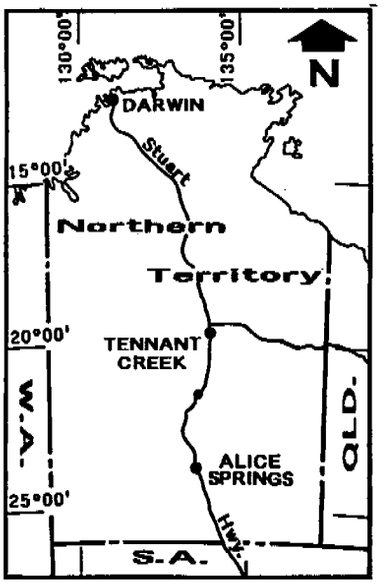


1. SUMMARY

This report details the work conducted by Poseidon Gold Limited (PosGold) within EL 7898 (Flynn), during the period 5/2/93 to 4/2/94.

Exploration Licence 7898 consists of fourteen graticular blocks located approximately 35 km north-west of Tennant Creek. Work completed by PosGold during this period includes:

- A regional geochemical vacuum drilling programme on a 250 metre x 50 metre grid.
- Interpretation of photogeological and airborne magnetic surveys.

Due to inclement weather and mechanical breakdowns the planned vacuum drilling was not completed. A total of 80 drillholes have been done, and results for these are still awaited.

It is planned to complete the vacuum drilling in year two of tenure, interpret all results, and follow-up any worthy anomalies with further vacuum and RAB drilling.

2. INTRODUCTION

2.1 Location and Access

Exploration Licence 7898 is located approximately 35 kilometres north-west of Tennant Creek. Access is limited to the dryer months and may be gained via the sealed Warrego Road to the Orlando Mine, thence north via unsealed tracks.

2.2 Climate Physiography

The climate of the Tennant Creek district is mild to warm and dry throughout autumn, winter and spring with cool to cold winds in winter. High temperatures (in excess of 35°C) occur in summer with seasonal rainfall expected from December to March.

The physiography of EL 7898 is variable, consisting of low to moderate relief in the southern and northern portions of the licence, with sheetwash and flood plain alluvial flats draining west through the centre of the licence.

2.3 Tenure

Exploration Licence 7898 consists of 14 graticular blocks and was granted to PosGold on 5 February 1993 for a period of six years, refer Figure 1.

3. REGIONAL GEOLOGY

The rocks within EL 7898 belong to the Flynn Sub-Group which is represented dominated by shallow water marine sediments represented by variably haematised sandstones, siltstones and pebble beds. Intrusions of east-west striking diorite and dolerite occur to the north. An unconformity between the Flynn Sub-Group and the Warramunga Group occurs to the south, with the position difficult to locate in the field.

4. EXPLORATION UNDERTAKEN DURING THE PERIOD 5/2/93 TO 4/2/94

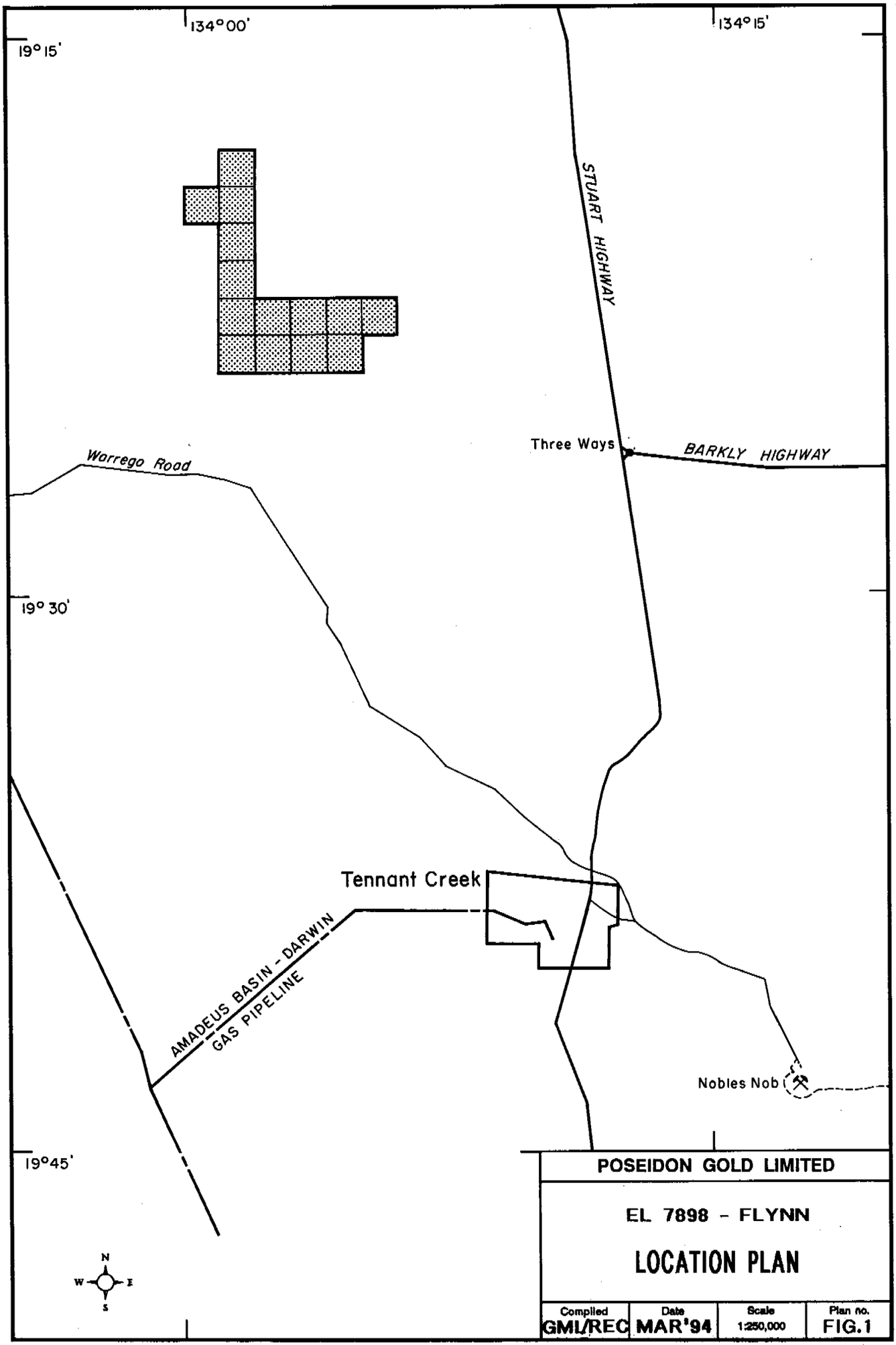
4.1 Airborne Magnetic Survey

Regional airborne magnetic surveys were flown over the Tennant Creek District in 1984 and 1989 by Aerodata and Austirex respectively. The data from both surveys have been processed and merged to provide contour and image processed plans at 1:50,000 scale.

Exploration Licence 7898 covers a zone of intense and complex magnetics, with a NE structure observed in the data on the northern blocks.

In the central blocks of the licence an elongate NW trending magnetic high represents either a dolerite sill or a fault.

Figure 3 presents a total field magnetic contour plan for EL 7898.



POSEIDON GOLD LIMITED

EL 7898 - FLYNN

LOCATION PLAN

Compiled	Date	Scale	Plan no.
GML/REC	MAR'94	1:250,000	FIG.1

REPORT NO. 11785

4.2 Photogeological Mapping

During 1992, PosGold contracted the services of Australian Photogeological Consultants Pty Ltd (APC) to undertake a detailed photogeological mapping exercise in the Tennant Creek district. This was achieved using a combination of 1:25,000 scale colour aerial photography, airborne magnetic data and field traverses.

On EL 7898, the photogeological interpretation suggests a dominance of Flynn Sub-Group sediments covering the majority of the licence. This has been confirmed by field inspection and vacuum bedrock drilling. Intrusive dolerite sills are interpreted to occur in the northern portion of the licence.

4.3 Regional Vacuum Drilling

In December 1993 a programme of broadly spaced vacuum drilling was planned and implemented over an area in the SE portion of the tenement. A total of 401 metres was drilled in 80 holes over the exploration licence. The drilling was planned to cover the two small magnetic anomalies and the intersection of mapped NW trending faults with these anomalies. Drilling was also conducted to determine if the interpreted dominance of the Flynn Sub-Group sediments.

Vacuum drilling was undertaken by Jackson's Drilling of Tennant Creek using a Nissan mounted Edson rig. Holes were drilled along 250 metre lines at 50 metre intervals.

A local AMG survey grid was established over the area using an east-west surveyed baseline. The drillholes were pegged on 250 metre spaced lines using chain and compass.

Most drillholes reached an average of five metres into weathered bedrock. Careful distinction was made between aeolian cover, overburden and bedrock to aid in the interpretation of results. All bedrock lithologies were logged, and a 4 kg sample of overburden, and 2 kg sample of bedrock collected.

Bedrock lithologies intersected were dominantly siltstones and sandstones, variably bleached and haematitic, and appear to be broadly representative of the Flynn Sub-Group.

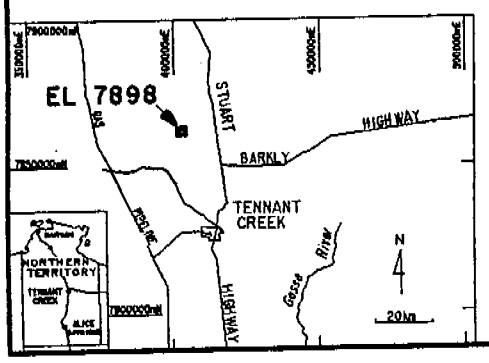
The overburden samples for all holes were submitted to Analabs in Perth for heavy mineral concentrating (HMC) and analysis for Au, Cu, Bi, Fe, Mn, Pb, Zn, Ag, Mo and Cd. At the end of this report period, results were still awaited. Once received, the results will be entered into the exploration database for statistical analysis, plotting and interpretation.

7867000N
394000E
395000E
400000E
405000E
406000E
7865000N
7860000N
7855000N
7853000N

Pn ?

Pn

Pw



LEGEND OVERLEAF

N

1km

POSEIDON GOLD LIMITED

EL 7898 - FLYNN

REGIONAL PHOTOGEOLOGICAL INTERPRETATON

Compiled	Date	Scale
GML/REC	FEB '94	1:50,000

REPORT NO. 11785

DAB: TENEMENT.sl7898

FIGURE 2

LITHOLOGY

SEDIMENTARY ROCKS

CAMBRIAN	Arthur Creek Formation Helen Springs Volcanics	€	Sandstone, chert, siltstone Weathered and ferruginized basalt
CAMBRIAN TO ADELAIDEAN	Rising Sun Conglomerate	Pur	Polymictic conglomerate, sandstone and quartzite
CARPENTARIAN	Tomkinson Creek Subgroup/Hayward Creek Formation	Pth	Lithic and sublithic arenite, pebbly arenite, quartzite
CARPENTARIAN TO LOWER PROTEROZOIC	Flynn Subgroup	Pn	Lithic and volcanolithic arenite; quartz-magnetite sandstone, siltstone; pebble beds Felsic volcanic and volcanoclastic rock with interbedded sandstone and siltstone (symbol)
	Warramunga Group	Pw	Volcanic arenite, siltstone and terrigenous mudstone including BIF; chert and jasper (hornfelsed shown by symbol)
LOWER PROTEROZOIC TO ? ARCHAEAN	Basement Rocks	A	Gneiss, schist, amphibolite, quartzite

INTRUSIVE ROCKS

Warrego Granite Red Bluff Granite	G1	G1: Weakly magnetically foliated porphyritic adamellite and granophyric granite
	G2	G2: Smooth textured non-magnetic muscovite granite and aplitic phases
		Coarse-grained porphyritic gabbro, diorite, and dolerite
Younger porphyries	Pox	Quartz-feldspar porphyry and sheared equivalents
Older porphyries	Po	Felsic porphyry
Tennant Creek Granite Cabbage Gum Granite Channingum Granite Mumbilla Granodiorite	G3 G4	G3, G4: Strongly magnetically foliated porphyritic biotite granite to granodiorite Several phases outlined by aeromagnetic images

LEGEND

- Photogeologically mapped fault and inferred sense of movement indicated
- Magnetically mapped major dislocation and inferred sense of movement indicated (teeth on overriding plate)
- Magnetically mapped minor break
- Zone of shearing
- Photogeological boundary
- Boundary interpreted from aeromagnetics
- Trends (photogeological and magnetic)
- Generalised dip and strike
- Small mine
- Major mine
- Anticline, syncline (mapped)
- Anticline, syncline (inferred, interpreted)
- Dyke, vein
- Aeromagnetic dipole anomaly
- Fault interpreted from gravity data
- Boundary of granite interpreted from gravity data
- Axis of gravity high
- Axis of gravity low
- Circular gravity high

Adapted from drg by Australian Photogeological Consultants Pty Ltd

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LEGEND FOR PHOTOGEOLOGICAL INTERPRETATION

Compiled/Drawn	Date	Scale
GML/REC	JULY '93	—

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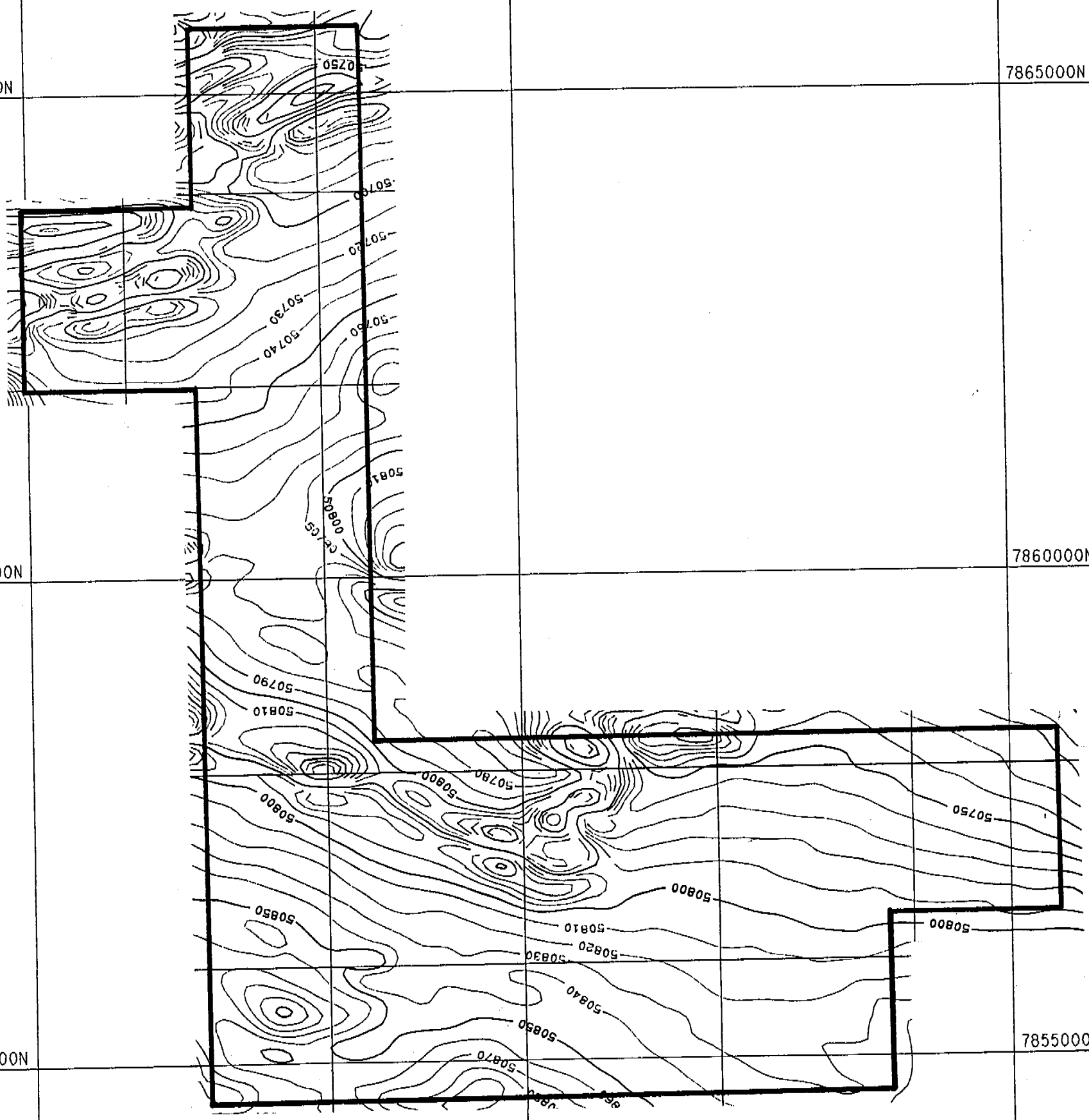
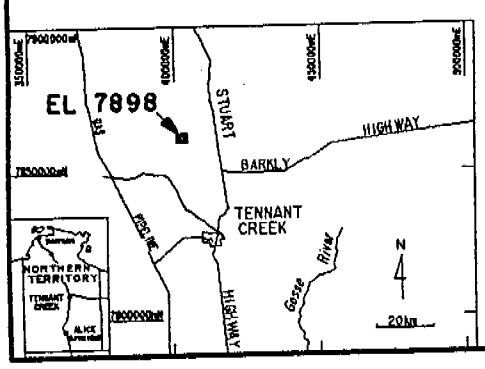
395000E
400000E
405000E
406000E
7865000N
7860000N
7855000N
7853000N





N

1km

POSEIDON GOLD LIMITED

EL 7898 - FLYNN

TOTAL FIELD MAGNETIC CONTOUR PLAN

Compiled	Date	Scale
GML/REC	FEB '94	1:50,000

REPORT NO. 11785

DAB: TENEMENT.el7898

FIGURE 3

5. EXPLORATION STATEMENT FOR THE PERIOD 5/2/93 TO 4/2/94

During the first year of tenure, PosGold incurred an expenditure of $7,121 on EL 7898.

A breakdown of this expenditure is detailed below:

TABLE 1

EXPENDITURE FOR THE REPORT PERIOD 5/2/94 TO 4/2/95

EXPENSE	COST
Employee Costs	$ 3,316
Overheads	$ 332
Drilling	$ 1,817
Assays	$ -
Operating	$ 1,256
Specialist Services	$ 77
Tenement Costs	$ 310
Research	$ 13
	$ 7,121

An application has been submitted to the Department of Mines and Energy for a variation of covenant from $20,000 to $5,000.

6. PROPOSED EXPLORATION PROGRAMME FOR THE PERIOD 5/2/94 TO 4/2/95

Future work programmes will see the completion of regional geochemical vacuum drilling. Assuming receipt of encouraging geochemical results it is expected that infill drilling will be required. The total minimum expenditure on EL 7898 during 1994/95 is expected to exceed $19,000 as per the following activity and expenditure breakdown.

7. PROPOSED EXPENDITURE FOR THE PERIOD 5/2/94 TO 4/2/95

To continue the exploration programme for EL 7898 detailed in section 6, the expenditure in year two of tenure is budgeted as follows:

TABLE 2

PROPOSED EXPENDITURE FOR THE PERIOD 5/2/94 TO 4/2/95

EXPENSE	COST
Employee Costs	$ 8,000
Overheads	$ 800
Drilling	$ 4,500
Assays	$ 2,500
Operating	$ 3,500
Specialist Services	$ 500
Tenement Costs	$ 140
	$ 19,940

8. CONCLUSIONS

Exploration conducted over EL 7898 during the first year of tenure forms part of a broad regional exploration strategy including a multi-disciplinary approach using geochemistry, geophysical and structural exploration techniques. This combined approach has been successful elsewhere in identifying local and regional targets worthy of investigation using regional vacuum drilling.

Vacuum drilling of one such target in year one of tenure remains incomplete due to inclement weather. This programme will be completed in early 1994 and all results assessed for follow-up with deeper RAB and/or RC drilling.

In addition, regional exploration coverage will be extended over the remainder of the licence area with the aim of generating further targets for subsequent geochemical and geophysical investigation.

APPENDIX ONE

VACUUM DRILLING LOCATION LOGS

EL 7898 FLYNN
VACUUM DRILLHOLE LOCATION LOG

BHID	EAST	NORTH	SNA	SNN	FROM	TO	ZONE
FLVC-001	398800	7855750	B	358401	2.4	3.0	3
FLVC-002	398800	7855800	B	358402	1.9	3.0	3
FLVC-003	398800	7855850	B	358403	1.9	4.0	3
FLVC-004	398800	7855900	B	358404	1.0	2.0	3
FLVC-005	398800	7855950	B	358405	.9	3.0	3
FLVC-006	398800	7856000	B	358406	1.1	2.0	3
FLVC-007	398800	7856050	B	358407	2.4	3.0	3
FLVC-008	398800	7856100	B	358408	.9	4.0	3
FLVC-009	398800	7856150	B	358409	.9	4.0	3
FLVC-010	398800	7856200	B	358410	.8	4.0	3
FLVC-011	398800	7856250	B	358411	.9	6.0	3
FLVC-012	398800	7856300	B	358412	.7	3.0	3
FLVC-013	398800	7856350	B	358413	.8	4.0	3
FLVC-014	398800	7856400	B	358414	.9	4.0	3
FLVC-015	398800	7856450	B	358415	1.0	4.0	3
FLVC-016	398800	7856500	B	358416	.8	4.0	3
FLVC-017	398800	7856550	B	358417	.8	4.0	3
FLVC-018	398800	7856600	B	358418	.8	4.0	3
FLVC-019	398800	7856650	B	358419	.8	4.0	3
FLVC-020	398800	7856700	B	358420	.7	4.0	3
FLVC-021	398800	7856750	B	358421	.7	4.0	3
FLVC-022	398550	7856750	B	358422	.9	6.0	3
FLVC-023	398550	7856700	B	358423	.8	6.0	3
FLVC-024	398550	7856650	B	358424	.9	6.0	3
FLVC-025	398550	7856600	B	358425	.9	6.0	3
FLVC-026	398550	7856550	B	358426	.7	6.0	3
FLVC-027	398550	7856500	B	358427	.6	4.0	3
FLVC-028	398550	7856450	B	358428	.6	4.0	3
FLVC-029	398550	7856400	B	358429	.6	5.0	3
FLVC-030	398550	7856350	B	358430	.7	6.0	3
FLVC-031	398550	7856300	B	358431	.6	6.0	3
FLVC-032	398550	7856250	B	358432	.6	4.0	3
FLVC-033	398550	7856200	B	358433	.4	3.0	3
FLVC-034	398550	7856150	B	358434	.4	4.0	3
FLVC-035	398550	7856100	B	358435	.5	4.0	3
FLVC-036	398550	7856050	B	358436	.5	4.0	3
FLVC-037	398550	7856000	B	358437	.7	6.0	3
FLVC-038	398550	7855950	B	358438	.8	6.0	3
FLVC-039	398550	7855900	B	358439	.8	6.0	3
FLVC-040	398550	7855850	B	358440	.9	6.0	3
FLVC-041	398550	7855800	B	358441	.9	6.0	3
FLVC-042	398550	7855750	B	358442	.9	6.0	3
FLVC-043	398300	7855900	B	358443	.9	6.0	3
FLVC-044	398300	7855950	B	358444	.9	6.0	3
FLVC-045	398300	7856000	B	358445	.9	6.0	3
FLVC-046	398300	7856050	B	358446	.9	6.0	3
FLVC-047	398300	7856100	B	358447	.9	6.0	3
FLVC-048	398300	7856150	B	358448	.6	4.0	3
FLVC-049	398300	7856200	B	358449	.4	3.0	3
FLVC-050	398300	7856250	B	358450	.7	6.0	3
					(m)	(m)	

ZONE 3 = BEDROCK

EL 7898 FLYNN
VACUUM DRILLHOLE LOCATION LOG

BHID	EAST	NORTH	SNA	SNN	FROM	TO	ZONE
FLVC-051	398050	7856250	B	358451	.8	7.0	3
FLVC-052	398050	7856200	B	358452	.8	6.0	3
FLVC-053	398050	7856150	B	358453	.9	6.0	3
FLVC-054	398050	7856100	B	358454	1.0	6.0	3
FLVC-055	398050	7856050	B	358455	1.0	6.0	3
FLVC-056	398050	7856000	B	358456	1.0	6.0	3
FLVC-057	398050	7855950	B	358457	1.0	5.0	3
FLVC-058	398050	7855900	B	358458	1.0	6.0	3
FLVC-059	398050	7855850	B	358459	1.0	6.0	3
FLVC-060	398050	7855000	B	358460	.9	4.0	3
FLVC-061	398050	7855050	B	358461	.8	5.0	3
FLVC-062	398050	7855100	B	358462	.9	4.0	3
FLVC-063	398050	7855150	B	358463	.9	4.0	3
FLVC-064	398050	7855200	B	358464	.7	6.0	3
FLVC-065	398050	7855250	B	358465	.9	6.0	3
FLVC-066	398050	7855300	B	358466	1.0	6.0	3
FLVC-067	398050	7855350	B	358467	1.0	3.0	3
FLVC-068	397800	7855000	B	358468	.9	6.0	3
FLVC-069	397800	7855050	B	358469	.9	6.0	3
FLVC-070	397800	7855100	B	358470	1.0	6.0	3
FLVC-071	397800	7855150	B	358471	.8	5.0	3
FLVC-072	397800	7855200	B	358472	.9	6.0	3
FLVC-073	397800	7855250	B	358473	.9	6.0	3
FLVC-074	397800	7855300	B	358474	.9	6.0	3
FLVC-075	397800	7855350	B	358475	.8	6.0	3
FLVC-076	397800	7855400	B	358476	.8	6.0	3
FLVC-077	397800	7855450	B	358477	.9	6.0	3
FLVC-078	397800	7855500	B	358478	.9	6.0	3
FLVC-079	397800	7855550	B	358479	.8	6.0	3
FLVC-080	397800	7855600	B	358480	.8	5.0	3
					(m)	(m)	

ZONE 3 = BEDROCK

APPENDIX TWO

BIBLIOGRAPHIC DATA SHEET

BIBLIOGRAPHIC DATA-SHEET

REPORT NUMBER	11785
REPORT NAME	ANNUAL REPORT FOR EXPLORATION LICENCE 7898 FOR THE PERIOD 5/2/93 TO 4/2/94, TENNANT CREEK DISTRICT, NORTHERN TERRITORY, FLYNN PROSPECT
PROSPECT NAME(S)	EL 7898 FLYNN
OWNER/JV PARTNERS	POSEIDON GOLD LIMITED
KEYWORDS	EL 7898 FLYNN SUB-GROUP VACUUM DRILLING GEOCHEMISTRY AIRBORNE MAGNETICS GEOMORPHOLOGY PHOTOGEOLOGY
COMMODITIES	GOLD, COPPER
TECTONIC UNIT	FLYNN SUB-GROUP
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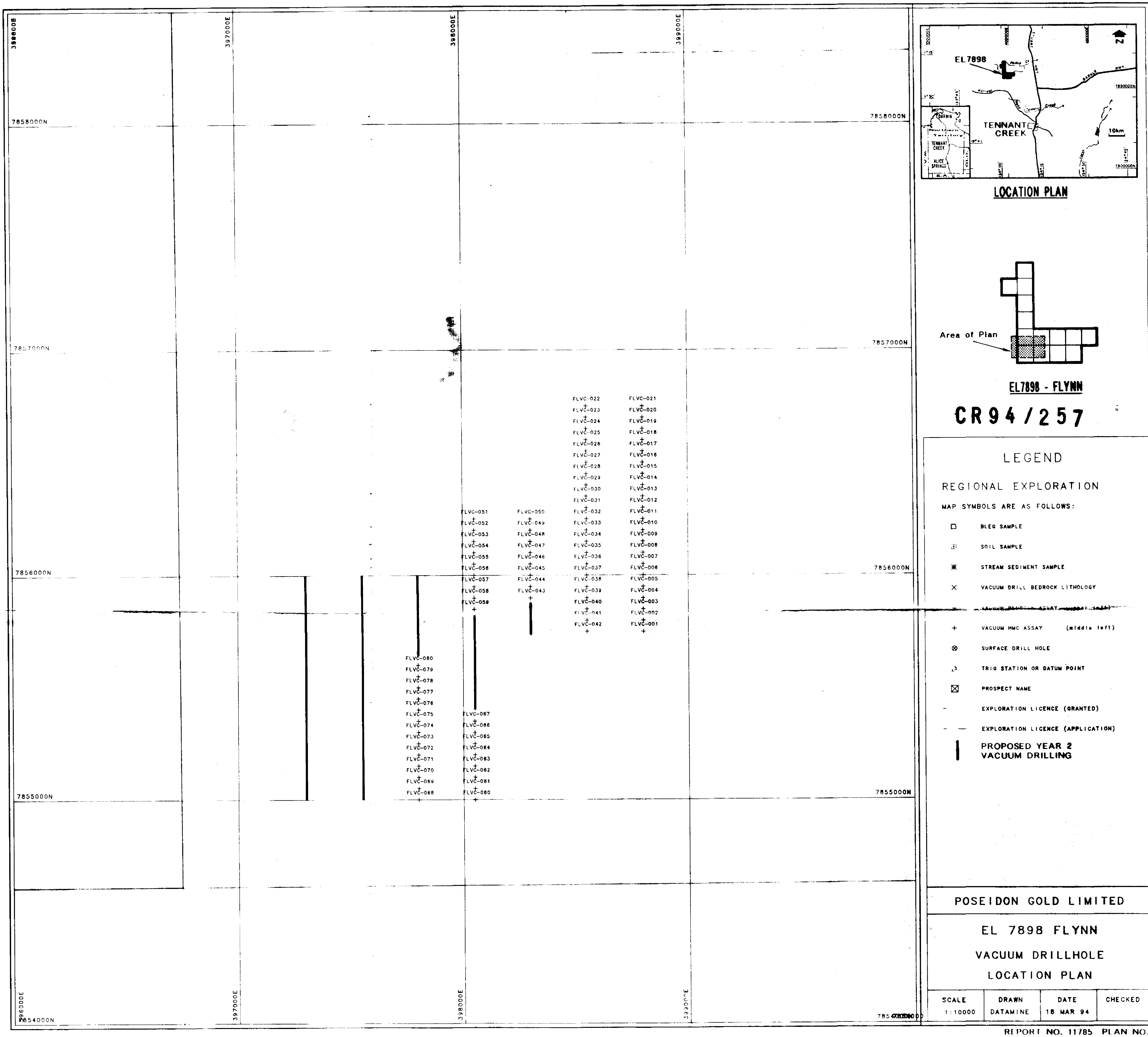
1:100,000 MAP SHEET	FLYNN 52/2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FLVC-076
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FLVC-078
FLVC-079
FLVC-080
EL7898
TENNANT CREEK
10km
LOCATION PLAN
Area of Plan
EL7898 - FLYNN
CR94/257
LEGEND
REGIONAL EXPLORATION
MAP SYMBOLS ARE AS FOLLOWS:
BLEG SAMPLE
SOIL SAMPLE
STREAM SEDIMENT SAMPLE
VACUUM DRILL BEDROCK LITHOLOGY
VACUUM HMC ASSAY (middle left)
SURFACE DRILL HOLE
TRIG STATION OR DATUM POINT
PROSPECT NAME
EXPLORATION LICENCE (GRANTED)
EXPLORATION LICENCE (APPLICATION)
PROPOSED YEAR 2 VACUUM DRILLING
POSEIDON GOLD LIMITED
EL 7898 FLYNN
VACUUM DRILLHOLE
LOCATION PLAN
SCALE
1:10000
DRAWN
DATAMINE
DATE
18 MAR 94
CHECKED