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ANNUAL REPORT
EXPLORATION LICENCE NO. 6795
FOR THE PERIOD 5/4/92 TO 4/4/93

WREN PROSPECT, TENNANT CREEK, NORTHERN TERRITORY

VOLUME I OF I

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DATE: APRIL 1993

AUTHORISED BY:

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1.0 SUMMARY

Owing to heavy rain during December 1992 to March 1993, the third year of planned exploration in EL 6795 had to be curtailed. The work completed consisted of a review of the ground magnetics over the Lion Prospect and a review of the geochemical responses obtained from the regional soil sampling conducted in the Mad Mick's mine area, also known as the Lost Hope Mine.

The vacuum drilling programme planned for March 1993 over the soil geochemical anomalies had to be postponed due to wet weather. It was hoped that this work could be completed prior to the compilation of this report however, the clay rich soil over the dolerite units remains waterlogged and is not amenable to vacuum drilling. The vacuum drilling programme has been rescheduled for May and will be completed prior to the end of the financial year.
2.0 INTRODUCTION

2.1 LOCATION AND ACCESS

Exploration Licence 6795 is located approximately 11km north of the Warrego township and is accessed via a well formed dirt road which leaves the Warrego Road immediately before the Warrego Mine processing facilities.

2.2 CLIMATE & PHYSIOGRAPHY

The climate of the Tennant Creek district can be characterised by hot summers with day time temperatures commonly reaching into the 40°C range and cool winters associated with strong easterly winds. Tropical rains between December and March can severely limit access to large parts of the field.

The physiography of the exploration licence ranges from broad flat valleys commonly over dolerites, low hills associated with siltstone and greywacke outcrops and steep sided ridges formed by the quartzites of the Tomkinson Creek Group.

2.3 TENURE

Exploration Licence 6795 was granted to Poseidon Gold Ltd on 5 April 1990 for a period of 6 years and comprised 20 graticular blocks. Subsequently the licence has undergone two statutory 50% reductions and currently consists of 5 blocks. Refer to Figure 1.

2.4 PREVIOUS EXPLORATION

The first recorded systematic exploration conducted in and around EL 6795 was undertaken by CRA Exploration and shortly afterwards by Central Electricity Generating Board (Exploration) Australia. Both companies flew regional scale magnetic and radiometric surveys in an attempt to locate uranium mineralisation along the unconformity between the Warramunga Group and the younger Tomkinson Creek Group. Although both companies detected several anomalies none were situated within EL 6795 and the follow-up work failed to produce any significant results.

In 1989 Poseidon Gold Ltd, (then Australian Development Ltd), implemented a stream sediment sampling programme which targeted the unconformity between the Warramunga Group and the younger Tomkinson Creek Group from the Stuart Highway in the east through to the end of the Short Range hills in the west. The sampling was conducted within EL’s 4895 and 4896 and also covered the area now held under EL 6795. The results of this work are reported in the 1990 Annual Report for EL’s 4895 and 4896.

Based on the results of the stream sediment sampling an application for 20 graticular blocks was made and upon granting, follow-up stream sediment sampling was conducted throughout EL 6795. Grid based soil sampling was undertaken over the catchments of the anomalous drainages and one area produced gold results to 50ppb. Limited RC drilling was used to test the geochemical anomalies. The results were disappointing and the source of the anomalies could not be found.
In 1991 a more regional approach was adopted and 770 soil samples were collected from lines spaced at 400 metre and 100 metre intervals. The samples were sieved to -180 microns and analysed by the ICP method for a wide range of elements. The highest gold value returned was 13ppb and at the time this value was considered too low to be significant.

A detailed ground magnetic survey was conducted over the eastern portion of the dolerite unit which is the host to the mineralisation at the Mad Micks mine. Refer to Figure 2 for the location of this survey. The survey was designed to delineate the extent of the dolerite and to enable crosscutting structures to be identified.

A copy of the final Total Field Magnetic contours is contained in this report (Plan 1) while plans and assay results for all the previous sampling are contained in the first two annual reports for EL 6795.

3.0 EXPLORATION CONDUCTED DURING THE THIRD YEAR OF TENURE

During 1992 a detailed examination of the ground magnetic data collected in the previous year was undertaken. To produce an exploration target worthy of follow up work it was hoped that structurally controlled dilation zones could be recognised. The dilatant zones would need to be large enough to enable sheeted quartz veins of sufficient size to develop. These veins are host to the gold mineralisation at the Mad Mick's mine.

The ground magnetic survey adequately defined the dolerite unit, however structural complexities or dilatant zones of sufficient size could not be recognised.

A re-evaluation of the regional soil sample assay results was also undertaken. This evaluation drew upon the increased knowledge gained by PosGold personnel after having completed several geochemical sampling programmes in the district. Work completed elsewhere in the field has indicated that gold results as low as 5ppb may be significant.

One area near the old Mad Mick's mine, (Figure 3), has been identified as sufficiently encouraging to conduct a detailed vacuum drilling programme. The programme will see the collection of 404 bedrock samples from 5 lines spaced at 400m and sampled on 25m intervals. The work was scheduled to be completed in late February or early March. Heavy rain during that period has delayed the drilling programme to later in April 1993.

4.0 FUTURE WORK PROGRAMME

In the forthcoming year the proposed vacuum drilling, described in Section 3 of this report will be completed. The geological and geochemical results of this work will be evaluated and a combination of in-fill vacuum, RAB or RC drilling, detailed magnetics and ground electrical prospecting methods will be employed to define any targets generated. Follow-up RC or diamond drilling may be required to evaluate any targets considered worthy of additional work.
5.0 EXPENDITURE STATEMENTS

5.1 EXPENDITURE DURING THE THIRD YEAR OF TENURE

During the third year of tenure a total expenditure of $14,892 has been incurred as shown in the breakdown below:

\[
\begin{array}{ll}
\text{Overheads} & 1,153 \\
\text{Geophysics} & 5,733 \\
\text{Consumables} & 727 \\
\text{Field Overheads} & 535 \\
\text{Surveying & Gridding} & 3,750 \\
\text{Salaries & Wages} & 2,994 \\
\hline
\text{TOTAL} & \$14,892
\end{array}
\]

5.2 PROPOSED EXPENDITURE TO 6/4/94

\[
\begin{array}{ll}
\text{Overheads} & 2,773 \\
\text{Consumables} & 750 \\
\text{Drilling} & 6,000 \\
\text{Field Overheads} & 3,983 \\
\text{Assays} & 13,000 \\
\text{Salaries & Wages} & 11,690 \\
\hline
\text{TOTAL} & \$38,196
\end{array}
\]

The expenditure for EL 6795 during the latter part of the year is dependent on positive results from the vacuum drilling currently in progress. As such it is anticipated that exploration expenditure for 1993/94 will be of the order of $20,000.

6.0 CONCLUSIONS

During the third year of tenure of EL 6795 the only field work undertaken was surveying and gridding in preparation for vacuum drilling. Unfortunately inclement weather delayed the vacuum drilling programme which will now be completed during the fourth year of tenure.

The review of previously generated data met with mixed results. The ground magnetics failed to produce the type of target sought while the regional geochemistry, previously considered unappealing, has proved sufficiently interesting to warrant further work. At the completion of the vacuum drilling programme the results will be assessed and future work requirements decided.
POSEIDON GOLD LIMITED

EL6795 - WREN
LOCATION OF GROUND MAGNETIC SURVEY

Compiled/Drawn: K.L-P/REC
Date: MAY '93
Scale: 1:25000

FIGURE 2

Area of Ground Magnetic Survey (Plan No. 1)