WOODLEIGH NOMINEES PTY. LIMITED.

ABN 92 050 120 057

REPORT ON EL27380

for the period

09/03/2011 to 08/03/2012

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1. **Summary:**

EL27380 was applied for with the primary intention of exploring for alluvial gold and tin as past experience has shown that there is a significant cover of alluvium over much of this area. The location of workable alluvial resources can often lead to the discovery of hard rock resources.

It has been found in the past that removal of economic alluvial material provides a clearer vision for future exploration in addition to an earlier cash flow for the operation.

2. **History:**

The Casey Family and later Woodleigh Nominees Pty. Ltd. has been involved with the Francis Creek area for approximately 50 years both in their own right or as a joint venture partner with CSR Limited. An estimated $0.75M was spent collectively on exploration of the area. After CSR Ltd. withdrew from the mining industry the Caseys and/or Woodleigh purchased their interests in the area and proceeded with further exploration. Development work completed on the adjoining group of MLNs comprising the Francis Creek Gold mine has been valued in excess of $1M in 1991 by Renison personnel. All of this work was completed and funded by the Caseys and/or Woodleigh.

In or about March 2010 EL 27380 was granted for a period of six years due to expire on 8/03/2016 with a covenanted expenditure of $11,000.

3. **Climate**

The Francis Creek area is in general terms typical Top End country comprising open Eucalypt woodland and open savannah grasslands. The Top End enjoys an annual rainfall around 1500mm, most of which falls in the Wet Season, from November to April.

4. **Geology**

In the Dominion EL7487 report dated April 1993, S.J. Pooley described the geology of this area as follows;
3.0 GEOLGY

3.1 Regional Geology

3.1.1 Regional History

The Pine Creek Inlier is a roughly triangular area of about 66,000 km² south and east of Darwin, which contain Early Proterozoic metasedimentary rocks resting on a gneissic and granitic Archaean basement. The metasediments represent fluvialite, shallow water, intertidal basinal and flyschoid sequence up to 14 km thick within an intracratonic basinal setting (Needham et al, 1980).

During the Top End Orogeny (1870–1780 Ma) rocks within the Pine Creek Inlier were metamorphosed to mainly greenschist facies, however, amphibolite facies metamorphic mineral assemblages dominate in the Alligator Rivers region. Known Archaean rocks are restricted to granite–gneiss of the Rum Jungle, Waterhouse and Nanambu complexes which form mantled gneiss domes near the exposed eastern and western margins of the inlier. (Page et al, 1980).

The sedimentary rocks are mainly shale, siltstone, sandstone, conglomerate, carbonate rocks and iron formations. Felsic to mafic volcanism and associated tuffaceous sediments are also present. The sedimentary sequence is intruded by transitional igneous rocks including post–tectonic dolerite sills and syn to post tectonic granitoid plutons and dolerite lopoliths and dykes. Largely undeformed platform covers of Middle Proterozoic to Mesozoic strata rest on these with marked unconformity. (Figure 3).

Since the Cretaceous the area has generally remained above sea level. The dominant forces which moulded today’s landscape were chemical weathering to produce laterite and “cut and fill” modification of the land surface by repeated erosional and aggradational cycles.

3.1.2 Structure

During the Top End Orogeny, the Early Proterozoic sediments, volcanics and dolerite were intensely deformed and regionally metamorphosed, resulting in tight to isoclinal folding and extensive faulting. Two phases of folding have been recognised. The older F₁ folds are tight to isoclinal folds with northwest to northeast trending axial planes. A penetrative slaty cleavage is present in pelitic rocks and a less prominent spaced fracture cleavage in sandstone. The younger F₂ folds are widely spaced, open types with east to west trending axial planes. Both folding events pre date granitoid intrusions. (Figure 4).
FIGURE 4
3.1.2 Structure (Cont’d)

Regional folding is locally modified by the major SE trending Noonamah – Katherine lineament zone, which consists of a 20 to 25km wide zone of shearing and folding with coincident gravity and magnetic anomalies. In the Pine Creek area the lineament is represented by the Pine Creek shear zone, which contains numerous aligned tight folds and shears and which hosts a concentration of gold occurrences. (Needham and Stuart-Smith, 1984a).

3.1.3 Metamorphism

All the Early Proterozoic rocks have been both regionally metamorphosed to greenschist facies and contact metamorphosed by the syn orogenic to post orogenic granitoids. The regional metamorphic grade ranges from predominantly lower greenschist to amphibolite facies in the NE of Pine Creek Inlier. Table 1 shows the characteristic metamorphic mineral assemblages for various rock types. Regional metamorphism is contemporaneous with regional deformation of the sedimentary pile during the Top End Orogeny. Throughout most of the area, regional metamorphism of pelitic rocks produced fine grained sericite and quartz. Sandstones usually exhibited fractured and/or strained quartz grains and minor sericite, chlorite and muscovite. (Figure 5).

Contact metamorphism largely overprints regional metamorphism indicating syn–post deformation. The contact metamorphic aureole is primarily albite–epidote hornfels with a narrower inner continuous zone of hornblende hornfels. K–feldspar–cordierite hornfels is present immediately adjacent to the granitoids. The contact metamorphic aureole varies in width from a minimum distance of 500m to up to 15km – 20km. In general, granitoids with steeply dipping margins will produce a narrower contact aureole whilst relatively shallow, flat lying granitoids will produce a more extensive contact aureole, although the extent of a contact aureole can be significantly wider or narrower under different temperature – pressure regimes.
3.2 Local Geology

The stratigraphy of the Frances Creek area comprises Early Proterozoic metasediments including Mundogie Formation and Wildman Siltstone. Mapping by the BMR indicates significant outcrop of underlying Masson Formation mapped in structural highs and lows and always in valleys. Nowhere in the mapped area did distinct lithologies of Masson Formation outcrop. In broad terms, the Frances Creek stratigraphy consist of uppermost carbonaceous metasiltstones intruded by dolerite sills which corresponds to the Wildman Siltstone. Underlying this sequence are carbonaceous metasiltstones which contain quartzite beds of various thickness. Lower most are carbonaceous sand/siltstones containing coarse ferruginous conglomeratic quartzite units. These underlying units correspond to the Mundogie Formation. The occurrence of the first quartzite horizon in the upper part of the sequence marks the transition from Wildman Siltstone to Mundogie Formation.

This Early Proterozoic metasedimentary sequence is bounded on the southern and eastern side of EL7487 by Early Proterozoic granite intrusives which include the Allamber Springs Granite and the Minglo Granites. (Figure 6).

Regional 1:25,000 scale mapping has defined sheared/faulted and folded metadolerites and schist of the Wildman Siltstone trending NW/SE. Quartz veining is common within localised faults and shears. Mundogie Formation metasediments outcrop along the eastern boundary of the licence area. These comprise NW/SE trending strike ridges of predominantly quartzites interbedded with lesser shale units. Contact of these metasediments and granite occurs within the south eastern graticular block. The contact is faulted and sheared and often contain gossanous haematite/limonite quartz veining within a hornfelsed metasiltstone.
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5. Exploration:

As stated earlier, an extensive study of previous exploration work completed in the Francis Creek area concluded that there had not been any programme dedicated to the discovery of alluvial gold and/or tin.

The alluvium in this area has continued to be by taking samples on a random pattern to a depth of 7-800mm and gravity concentrated by hand washing in a prospector’s dish. In addition, four samples of 200 litres each were taken and a concentrate produced. Initially this was intended to be done off site using a Wiffley table but this item was not available at the required time. The samples were instead treated on site by hand as this was considered the quickest in the long run. The first two samples were taken from the bank of Francis Creek near the road crossing. The concentrate from these samples were examined under a hand held microscope for visible gold and/or tin particles. A quantity of Iron was also observed. The concentrates were then covered with HCl in the presence of zinc which has the effect of turning the Cassiterite particles to a silver gray colour. This makes them easy to separate from the iron particles present. The net result was a "head grade" of approx. 200gm.Sn/cubic metre from the northern side of the creek and approx. 150gm.Sn/cubic metre from the south side. Having removed the Cassiterite from the concentrate, the bulk of the remainder was dissolved in hot HNO₃, the residual particles were removed to leave the gold which when calculated back to the original sample provided a grade of approx. 0.5gmAu/ cubic metre in both samples. These results were considered a little disappointing as it had previously been considered that this area would be better than this, however, more sampling is required to prove, or otherwise, the viability of this area.

The second two samples were taken from the east and western sides of an area identified by CSR and later drilled by Dominion located approx. central to the EL and east of the Francis Creek gold mine. They were treated in the same manner as the first two and showed little in the way of tin and the gold was a little weaker at approx. 0.3gmAu/cubic metre.

EL27380 is still considered to hold good potential for a workable alluvial deposit in addition to the possibility of a hard-rock gold resource being located.
6. **Further work required:**

   The main focus recommended for the following years work is to determine the alluvial potential of the area and to take a bulk sample/s from the area of the Francis Creek crossing. If possible the "Target 3" area should be drilled to a greater depth than 30 metres, that is below water level.

7. **Expenditure:**

   See expenditure report previously submitted.