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EXPLORATION LICENCE 26/85

MOINA DISTRICT

TASMANIA

C.H. WHITEHEAD

RELINQUISHMENT REPORT

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EXPLORATION LICENCE 26/85C O N T E N T S

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E.L. 26/85 was originally granted in November 1985 to C.H. Whitehead, the exploration objective being to examine the tungsten, tin and bismuth potential of near-surface material present at innumerable mines, old diggings and prospects occurring within the 11.5km² area of the Moina district.

In April 1986, a J.V. Agreement was reached between the licence holder and Renison Ltd and from that date onwards, Renison (R.G.C.) assumed responsibilities as operators of the E.L. Their prime interest in the area was an investigation of its gold potential, in particular a detailed examination of the old mines - Higgs and Narrawa Creek gold mines. During the last two years of R.G.C. activities, a more regional approach to the licence area was made, and eventually in June 1990, R.G.C. decided to terminate any further involvement in the area.

The current report summarises the nature and results of investigations completed within E.L. 26/85

2. LOCATION AND LAND TENURELOCATION

E.L. 26/85 covers an area of 11km² to the south of CETHANA Road on the western side of Lake Cethana. Wilmot River Power Station is in the NE corner of the licence area.

The central and southern parts of the licence are reached by the Dolcoath Hill Road, while the NARRAWA REWARD and HIGGS gold mining area is accessed by a dirt road which runs from Cradle Mountain Road along the north side of Narrawa Creek.

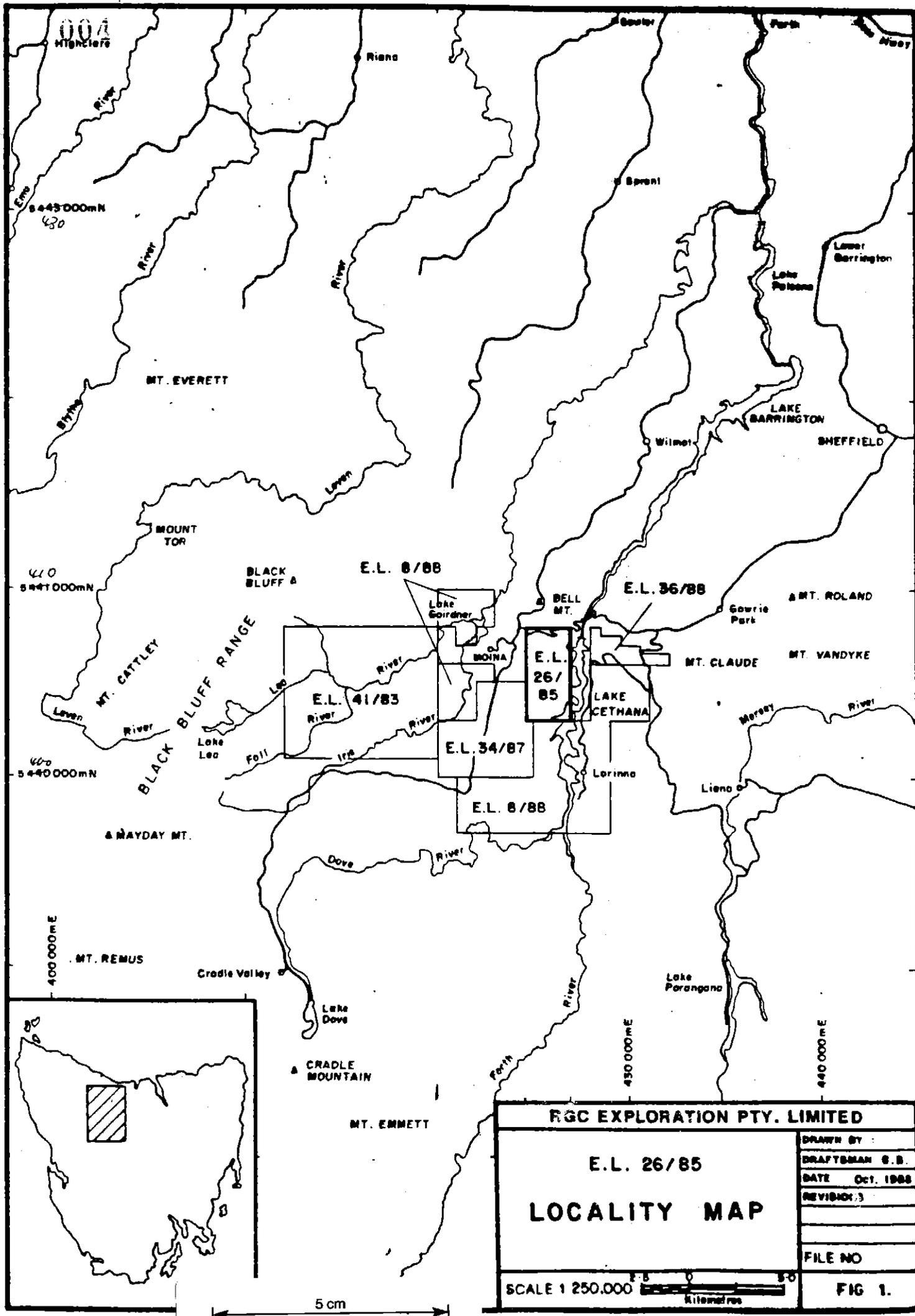
The Narrawa, Dolcoath and Bull Creeks traverse the licence from west to east draining into Lake Cethana.

LAND TENURE

E.L. 26/85 was granted to C.H. Whitehead on 20th November, 1985. However, on 17th April 1986, an agreement on E.L. 26/85 was reached between C.H. Whitehead and Renison Ltd (a wholly owned subsidiary of Renison Goldfields Consolidated). Gold Fields Exploration P/L - the exploration division of R.G.C. has carried out exploration on the licence since that date until June 1990.

The mining leases, 13M/83 and 22M/85 (now C.L. 44/89) which partially lie within E.L. 26/85 were excluded from the "Exploration Area" under the terms of the Agreement.

Three freehold properties occur within the Licence - Property 1847 is owned by Mrs T.J. Gillespie, and properties 1845 and 1848 are owned by Mr C.D. Butler, both owners currently residing in N.S.W.



3. REGIONAL GEOLOGY, MINERALISATION, MINING

REGIONAL GEOLOGY

Undifferentiated Cambrian "Bull Creek Volcanics" dominate in the south of the licence area. These are overlain unconformably to the north by Ordovician conglomerate (Roland Conglomerate) and sandstone (Moina Sandstone) sequences.

The Cambrian and Ordovician rocks have been folded and then intruded during Devonian times by the Dolcoath Granite and a series of associated quartz feldspar dykes. Folding is open and symmetrical, trending east-west, with similar drag folding trending north-west.

Tertiary sediment, greybilly and basalt are common in the region, but only a little Tertiary cover is evident in the northern part of the licence.

MINERALISATION

A number of old mines occur in the E.L. 26/85 area, with most of the deposits spatially and genetically related to the Devonian intrusion of Dolcoath Granite around which a mutual zonation of mineralisation is postulated. Occurring within or at the margins of the granite are the W, Bi, Mo deposits, with Au and Sn mineralisation further away and an outer zone of Ag-Pb represented by the Round Mountain deposits.

The Dolcoath granite is thought to dip at a shallow angle to the west, with Cupola extensions generating and the development of skarn occurrences at the Shephard and Murphy, Tea-Tree Creek and Stormont/Fletchers

MINING

Many old mines occur in the district, mining having commenced around the 1890's.

The first major report on mineral deposits in the Moina and Round Mount districts was written by Twelvetrees (1913), and a second year report by Reid (1919). Collins in Jennings (1979) gives a brief summary of deposits in the area, and provides a list of reports written on individual deposits.

Two old gold mines - Narrawa Reward and Higgs - are located in the E.L. area within the western contact aureole of the Dolcoath Granite. The Narrawa Reward Mine was worked prior to 1913 with values of up to 6g/t Au being reported in the sulphide ore. Mining at Higgs did not begin until 1934, and continued intermittently to 1947. A total of 28.35kg of gold is estimated to have been recovered during the period.

4. PREVIOUS EXPLORATION

The present licence area was previously part of E.L. 8/65 and explored until 1973 by the Mt Lyell Mining and Railway Co Ltd.

In March 1973, the area became part of E.L. 7/73, applied for by Asarco (Aust) Pty Ltd. This licence area covered Cambrian volcanics, and although originally 743km², in 1974 the area was reduced to 429km².

In 1976, C.R.A. joint ventured into E.L. 7/73, the title eventually being transferred to them in 1977. In 1979 the licence was further reduced to 199km².

During the period 1981/82 extensive exploration was carried out in the northern part of the present E.L. 26/85. However, C.R.A.E. were primarily interested in the tin and base metal mineralisation.

5. CURRENT EXPLORATION5A. EXPLORATION OBJECTIVES, PROPOSED WORK

The 11.5km² area of E.L. 26/85 was originally acquired by C.H. Whitehead to investigate the potential, and if justified, to undertake detailed economic appraisals of individual old mines, workings and known prospects within the Dolcoath Hill area of the Moina District. Special emphasis was to be placed upon the examinations of sites of dumped material and tailings associated with the mines and workings, the overall intension being to block out additional reserves of wolframite/cassiterite ground to supplement eluvial material being mined and treated at the adjacent Iris Mine (Mining Lease 31M/83) operated by C.H. Whitehead/G.A. Lavell.

A two year work programme was originally proposed, initially completing a regional exploration evaluation of the E.L. licence area, followed by a detailed investigation of the following old Sn, Bi and W workings - namely

- Dolcoath/Audlana
- Princess
- Squid
- Sayers
- Narrawa Reward
- Packets
- Blacks

These investigations would include:-

- Grid establishment over the workings
- Survey and base map preparation
- Grid surveys including geologic observatoins, geochemical soil sampling, and possible ground magnetics
- Examination of old workings, dumps and tailings, including detailed sampling
- Overall review and evaluation

E.L. 26/85 was granted on 20th November 1985, and the above mentioned regional exploration programme was initiated - please refer to C.H. Whitehead E.L. 26/85 quarterly report to 20th February 1986.

During early February 1986, the licensee was approached by Goldfields Exploration Pty Ltd with the proposal to enter into an Agreement to explore and develop mineral deposits within the licence area, and eventually, a J.V. Agreement was signed on 22nd April 1986.

5B. WORK COMPLETED

During the period 22nd April 1986 to 26th June 1990, R.G.C. Exploration Pty Ltd were manager/operator of exploration work within E.L. 26/85.

It was originally the presence of gold anomalism/mineralisation at the Higgs and Narrawa Reward Gold Mines which led Gold Fields Exploration - subsequently R.G.C. Exploration Pty Ltd - into the area in 1986, and since that time R.G.C.E. activity tested the gold potential of both the two above mines and the region within the E.L.

Details of exploration work completed by R.G.C.E. are summarised on an annual basis below. For more specific results of work, the reader is referred to the various R.G.C.E. Annual Reports - see References.

Year 1 - 1985/86 Exploration WorkExploration work completed

- Reconnaissance rock chip sampling in the vicinity of the old old mine/prospect works, in particular Higgs and Narrawa Reward.
- Compilation of C.R.A.E.'s geological, geochemical and geophysical data onto 1:5,000 standard sheets.
- Compilation of an orientation soil sampling study in the vicinity of the old workings at the Narrawa Reward and Higgs Gold Mines.
- Relogged C.R.A.E. drill holes DD82 DG-1 and DD82 DG-2, and reassayed the core for gold.
- Refurbished the old C.R.A.E. Dolcoath Grid.
- A review of the C.R.A.E. geophysical data was initiated by Dr J. Bishop it (Mitre Geophysics).

Results of work

- Rock chip sampling indicated the presence of gold mineralisation especially in the vicinity of the old Higgs and Narrawa Reward mines.
- It was established that previous exploration by C.R.A.E., although extensive, did not test the areas gold potential.
- Previous C.R.A.E. surveys were found to have delineated coincident geochemical and geophysical anomalies which corresponded with the known gold mineralisation at the Higgs and Narrawa Reward Mines. These anomalies suggested mineralisation at both mines may have substantial strike

lengths (400-500m) beyond that exposed. Similar anomalies were found to occur elsewhere on the grid and represent follow up targets.

- A soil sampling orientation study indicated hand augering would be an effective means of sampling the grid for gold. It was determined that previous C.R.A.E. hand auger soil results for Cu, Pb, Zn, Ag, Mo, Sn and W were acceptable and need not be repeated.
- Economic gold grades were not achieved in either of the C.R.A.E. holes drilled near the Narrawa Reward Mines and the grades in the core drill did not adequately explain the gold soil anomalies.

Year 2 - 1986/87 Exploration WorkExploration work completed

Work during the year was concentrated on the Dolcoath Grid (northern part of E.L. 26/85). This work consisted of:-

- The grid was mapped at 1:5,000 scale, with the central area at a scale of 1:1,000.
- The Higgs Workings and Narrawa Reward were mapped at 1:250.
- The Packetts Workings were mapped at 1:1,000.
- The grid was soil sampled using both a hand auger and where necessary the wacker sampling techniques. Soils were assayed for Au, Cu, Pb, Zn and As.
- The old workings were extensively channel sampled.
- Systematic rock sampling was undertaken.
- A review of the C.R.A. geophysical work over the Dolcoath Grid was completed by Dr John Bishop.
- Three diamond drill holes (Nos 1, 2 and 3) were drilled targetting beneath the line of the Higgs Workings. These holes were spaced 100m apart.

Results of work

- Geologic mapping of the gridded area was shown to be predominantly within Ordovician sediments which were divided into four broadly mappable units.
 - Conglomerate (Roland Conglomerate)
 - Tubicular Quartzite
 - Massive quartzite and psammopelite
 - Mixture of pelite/psammopelite and calc-silicate hornfels

The calc-silicate bearing units were considered to be "transitional beds" to the overlying Gordon Limestone. The sediments had been intruded by Dolcoath Granite outcropping on the eastern edge of the grid, and two major periods of folding had affected rocks.

- Mineralisation in the Higgs and Narrawa Reward Mine appeared to be closely associated with shearing in the rocks.
- Soil sampling indentified major gold, gold arsenic and gold-base metal anomalies.
- Chemical sampling in the workings recorded high gold values, with the Higgs Mine showing 4.5 metres @ 7.19g/t Au and 6.6g/t Au in the Higgs West open cut.
- Systematic rock sampling gave anomalous Au results correlatively in part with soil anomalies.
- Geophysical work showed overlapping VLF and UTEM anomalies corresponded with mineralisation at the Higgs and Narrawa Reward Mines and possible strike extensions.
- Gold values were disappointingly low in drill core of the three holes drilled compared with surface Au values. However, anomalous gold values (0.1g/t Au) were intersected over wide intervals (e.g. ND-1: 20m @ 0.48g/t Au).
- Surface sampling and petrological descriptions indicate mineralisation and alteration could be related to a multi-phase precemetoylic event associated with the intrusion of the Dolcoath granite and related porphyries.

Year 3 - 1987/88 Exploration WorkExploration work completed

- Earlier reports and literature was reviewed.
- A review of work completed on the Dolcoath Grid was finalised.
- An examination and sampling of the H.E.C. Wilmot Tunnel was completed.
- An analysis was made of the various mineralisation styles in the area, and the potential of gold bearing skarns evaluated.
- The E.L. area was included in a regional magnetic study completed by Dr Leaman.

Results of work

- The review of the "old workings" highlighted the structural control of mineralisation. Most of the lodes were quartz veins containing embedded wolframite, cassiterite, molybdenite and bismuth minerals, the lodes themselves being hosted by a variety of lithologies. The sulphides were found to be variable, and gold appeared widespread in low concentrates.

*Preferred
the original
Drilling intersection*

- Review of Dolcoath Grid:-
 - A drill target was defined based upon the intersection of major structures and certain lithologies which could act as a favourable host.
 - A gold geochemical trend paralleling Narrawa Creek appeared to be linked with known gold occurrences and correlated with a noisy magnetic zone.

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- Wilmot Tunnel:-
 - No significant assay results were obtained.

- Geophysical Study:-
 - No factual points appeared to be revealed from this work.

Exploration work completed and results

- A comprehensive review of geophysical data was completed over the Lorinna/Moina region by Dr D. Leaman.

The objective was to "appraise the usefulness" of previous regional gravity and magnetic surveys, and more specifically to identify and define:-

- The main regional structure
- ^{or} Tectonic lineations and their trends
- Correlations of Tertiary basalt cover thickness and underlying lithologies
- Regional mapping.

E.L. 26/85 was included in a regional geologic approach over the R.G.C. exploration licence in the Moina-Lorinna region. All rock outcrops were systemically examined and geological observations recorded on segmented monochrome air photo enlargements, subsequently compiled and replotted on two 1:25,000 scale "interpreted geology" maps.

Of 26 rock chip samples collected in the regional work, only two fell in E.L. 26/85

- Stream Sediment Sampling.

During the year this involved the collection of a pan concentrate sample and a minus 200 mesh fraction sample from 26 locations within the E.L. area. These were analysed by the Neutron Activation technique - with 31 elements analysed.

- Humus Soil Sampling.

The collection of 13 soil samples in the upper A horizon along the Narrawa Grid Line 5810E, between 5040N and 5105N (5m intervals). Results showed a close correlation between C horizon sample results.

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