INTRODUCTION : PHILOSOPHY

In making application for E/L 28/95 we believed it was entirely feasible for amateur explorers to successfully carry out preliminary mineral exploration on a relatively low cost basis , anywhere in Tasmania.

Our first year exploration programme was aimed at geochemically determining an area of ground with evidence of sulphide mineralisation, that was worthy of proper and thorough exploration.

Our initial exploration aims were designed to test a geological theory, held by us, that the fine alluvial gold known to have been recovered from Diamond Creek did not have its origins in a nearby quartz reef, but rather, was a result of leaching over a long time ie. Tertiary; from a near surface volcanogenic massive sulphide occurrence that will/may be found located in the vicinity of the headwaters of Diamond Creek, in the area known as Davies Hill.

The key words driving our exploration budget further are committment and multiskilling.

By utilising the aid of the huge volume of exploration data made available to us by the T.M.R., we aim to prove our theory, with as minimum environmental impact as is possible.

We will get in, do the work, and get out.

With these thoughts in mind we have set out to undertake careful exploration of the E/L in order to show cause why the E/L should be extended to us for the period 7/97 - 7/2001.

EXPLORATION SUMMARY 6/1996 - 6/1997

Activities carried out:-

Definition and marking of lease boundaries

Erection of survey marker flags

Collation of regional geological information

Discussions with landowners

Records research

Laying of stringlines

Identification of outcrop exposures

Collection of soil and rock chip samples/trenching/hand auger

Stream sediment sampling/reconnaisance

Review of aerial aeromagnetic program

Ground based magnetometor programme

Metal Detector Programme

Landscape, specimen photography

Professional review

GEOLOGY

EL 28/95 comprises a two square kilometre area of mainly Crown land, three kilometres due north of Queenstown airport, Western Tasmania, and three kilometres west of the Cape Horn and Crown Lyell copper deposits.

Davies Hill, the main feature of the license area comprises the bulk of the geographical centre of the licence and is the highest ground in the surrounding region N/W of the Lyell mineral field, at around 405 metres altitude.

Situated adjacent to and west of the Owen Lyell fault system, Davies Hill comprises twin mounds of Cambrian felsic quartz hornblende porphry type basalt, that covers an area of about 1 sq kilometre of the license itself.

From its summits, excellent views of the West Coast range can be observed.

Rainfall in the license area is equivalent to the highest in Tasmania. The terrain is generally moderate to steep and is mostly covered by very thick 30 to 40 year old regrowth and scrub.

Access is by one overgrown foot track dating back many years.

The main feature of Davies Hill is Diamond Creek which starts near the summits, flows steeply west, and follows a mapped, North South trending fault line (Lyell 81), that divides the hill into east and west summits.

Another small tributary drains the west summit, linking with Diamond Creek near the Zeehan Hwy.

The porphry basalts dip west at 85 degrees and trend in a north west direction.

The remaining license area consists largely of upturned Devonian/Silurian mudstones, siltstones, sandstones, with quartz tuffs in regular evidence, supporting existing geophysical maps.

PROSPECTIVITY

Although fine gold has been panned in several creeks adjoining the vicinity of EL 28/95 the area is generally considered a barren field of Cambrian porphry basalts flanked by Devonian mudstones lying in an area of the Dundas Trough that has little potential for volcanogenic massive sulphide deposits. Fitzgerald (1984), Quayle (1995), Shepard (1975), Brophy (1976), Meares (1978).

Duffy, McKeown (1992) are the exception to the rule.

“excellent exploration potential exists to the north and south of Mount Lyell for the discovery of similar Cu - Au mineralisation or base metal volcanogenic massive sulphide mineralisation”.

The license region has a rich exploration history and the ground around it has been held by numerous major mining houses over the last 40 years, including Pickards Mather, Cyprus, RTZ, Mt. Lyell, Goldfields and E.Z. Land adjacent to it has recently been extensively explored by BHP and RGC.

In 1971 Mt. Lyell acquired the license area as part of E/L 9/66, before it became E/L 11/82, then E/L 25/91, and eventually E/L 28/95 in 1995.

Though many thousands of dollars in accumulated exploration expenditure has been spent in the regional vicinity, records sighted suggest that only minor exploration has ever been carried out on Davies Hill itself, and it is doubtful if more than one or two geologists have set foot on either of its summits in the last twenty five years.

Aerial geophysical surveys (1993) and aerial magnetic surgeys (83/93) as well as one minor down stream traverse of Diamond Creek, appear to be the main exploration efforts contributing to corporate knowledge of the two square kilometre creek.

Local knowledge of Diamond Creek and Davies Hill is very scarce. The steep terrain, thick bush and relatively poor road access, suggests that Jack Stephens, the hermit prospector, a few assorted nearby land owners, and amateur gold panners, have been the only people to wander up through Diamond Creek in the last 25 years.

REGIONAL EXPLORATION HIGHLIGHTS 1963 - 1997

TMD 63	Three drill holes drilled at Madam Howards north. The results were judged not economic.
Lyell 81-82 EL 25/71	Two stream sediment sample and rock chip samples were taken from a small creek tributary from the east slope of East Davies Hill.
MRV 83	Aerial geophysical mapping programme
Pasminco 88 EL 25/91	Aerial magnetic programme
Pasminco 93	Aerial magnetic programme
RGC BHP 93 EL 102/91	Aerial Magnetic Programme
RGC BHP 92/93	Seven kilometres of track cutting on land adjacent to eastern side of E/L 28/95 boundary. Extensive Huminex soil sampling programme. One x 350 metre drill hole. This hole was drilled at a 45 degree angle dipping west. It came within fifty metres of the south eastern license boundary. Chalco pyrite indicators and blebs were observed though results were considered inconclusive and no further work carried out.
Lyell 82 EL 25/71	Extensive track cutting and Huminex soil sampling programme testing for Pb and Zn anomalies, on land immediately adjacent to the eastern license boundary. Numerous Zn and Pb anomalies striking in a narrow north south direction were noted. (This is the geo chemical anomaly sought by BHP RGC in their Penghana Drill Hole in August 1993).

REGIONAL MINING HISTORY

Although no mining activity is known to have been carried out on the license area, several shallow and very old exploration trenches were noted on the summit area of Davies Hill west. The E/L lies immediately north and east of the two principal mineral occurrences known to have been worked in the vicinity. One is the Diamond Hill gold mine, a narrow quartz reef adit mine, two kilometres south west of Davies Hill, next to Diamond Creek. It has been suggested that the area was also worked alluvially from the early 1930s to 1950s. The other deposit known to have been worked is the Madam Howards North Baryte Mine.

Records for both workings are scarce and have not yet been sighted. Other nearby gold and copper workings, including Shores Lode, Peevers Lode, Gold Creek and Raggedy Anne, appear to share a similiar historical demise.

A few days in the newspaper records section of the Tasmanian Museum archives would see a more complete mining history of the region be assembled.

Ground reconnaisance was necessary, in the case of Madam Howards North and Diamond Hill, to identify rock exposures in order to determine their characteristics and similar presence, if any, on E/L. 28/95.

Numerous trenches and adits were sighted on both workings, though no mullock heaps containing sulphides were noticed.

The Tasmanian mines department drilled three diamond drill holes at Madam Howards North in 1963 and concluded the veins were not economic. (Fitzgerald 1984)

It was learned that the baryte mine was worked during the last war as a source for optical lense materials, for the armaments industry.

An anomalous gold assay, 1.2 ppm, was reported from a small creek that drains the workings. This creek was one of only two creeks that reported anomalous gold assays in an extensive regional stream sediment sampling programme carried out in the Yolande grid area by Mt. Lyell Mining and Railway Co. in 1980 - 81. (The other being Gold Creek, two kilometres north of the license area.)

Although baryte or sulphide mineralisation was not sighted in any mullock heaps, it can be assumed that silver was the mineral sought in later decades, given the recollections of Pat Hull, local artist and historian, who remembers collecting baryte crystals from the old workings in the 1940s.

It should be noted that the Madam Howards North was originally supposed to have been a talc or chalk mine, started up during the first world war. This theory was put by a 93 year old Queenstown man, Harry Dean, who remembers visiting the site as a young boy, and confirmed by Pat Hull.

Reconnaisance of the site itself saw part confirmation of the opinion, after exploration and discovery of a well hidden adit and winze complex not more that 200 metres west of the Zeehan Highway.

A well crafted 80 metre long, 1.5 metre high, curved railway tunnel was observed from a well hidden portal entrance. Though flooded to thigh deep, the rails and backs were in good condition. The walls appeared to comprise smooth, slick mudstone, siltstone textures and characteristics, not unlike talc.

The portal and rail tunnel connects with a well camouflaged trench and winze system approximately 10 metres deep.

Investigation was limited due to flooding, though rehabilitation of the portal and winze would be a relatively simple earthmoving operation enabling quick drainage and a detailed rock chip sampling programme to be carried out.

The good condition of the mine workings and the close proximity to the Zeehan Highway, makes it a likely candidate for a mining heritage type nomination, at a future date.

The three drill holes drilled by the mines department in 1963, suggesting an orebody not then economically viable, also means it is an ideal candidate for a comprehensive records review.

CREEK SYSTEMS

The steep terrain of Davies Hill is indicative of severe wasting caused by high rainfall and possible slumping as noted in a Mt. Lyell Yolande map from 1982, that shows a north south fault line bisecting the twin Cambrian basaltic mounds.

Diamond Creek commences at an altitude of 380 metres and flows south cutting a steep path down through the twin basalt crowns to an altitude of 285 metres, over a six hundred metre long course to where it meets Zeehan Highway.

Another small creek, two hundred metres north west of Diamond Creek, has caused extensive erosion of the south western slopes, indicated by the steep gully. This tributary flows into Diamond Creek near the Zeehan Highway.

Aerial photograph interpretation and reconnaisance traverses support the mass wasting conclusions.

The northern slopes are relatively gentle in comparison and are drained by several minor tributaries of Whipsnake Creek, which flows north to the Yolande River, and Pearl Creek which flows south eventually joining Diamond Creek 4 kms S/W of Davies Hill.

Minor stream sediment sampling was carried out in the latter creek, for Au, Pb, Cu, and Zn by Mt. Lyell in 1981, though results were insignificant. (Lyell 1982)

The southern slope of east Davies Hill supports three minor tributaries that flow south west into Diamond Creek. Traces of gold were reported from one of these tributaries nearest to Diamond Creek. Nearly all of the creeks on the E/L have been visited.

All creeks in the license have been visited. Forty (40) stream sediment samples have so far been collected from Diamond Creek commencing from its junction at the Zeehan Highway at approximately 20 metre intervals.

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MAGNETICS (Aerial)

Two aerial magnetic helicopter surveys have been carried out over the Yolande Sedgewick region. Leaman 88/93 by previous license holders.

Review of Leaman (93) was carried out over an extended period and led to the following conclusions.

In March 93 a Squirrel Helicopter carrying a Scintrex Ceasium Vapour magnetometer flew over the license area proper, in 200 metre wide east west runs, at an altitude of 80 metres and flying at a speed of eighty knots or 40 metres a second.

The cycle time of the magnetometer was 0.1 sec and the reference base value used was 62335 nT (for 420,000S 453000E).

Digital magnetic recordings/samples were taken at an interval less than ten metres. Satellite navigation ensured an accuracy of + or - 2 metres.

In his intial interpretation of line profile maps, 1D and 2D modelling maps, the author concluded that twin magnetic anomalies lay paralell on Davies Hill.

“the two sub paralell bodies near Davies Hill are interesting. The northern and southern limits of this second (eastern body) are anomalous”. (Leaman 1993, pg 4 Anomaly Correlations)

Leaman recommended field reconnaisence and physical proper assessment in order to obtain complete appraisal and suggested imagery coupled with gravity, in order to appraise the strongly magnetised porphryies better.

MAGNETICS (Ground)

In late October 1996 a two week ground magnetometer programme commenced over the E/L area using a Scintrex MK V1 digital magnetometer set on a cycle time of 3.7 seconds and using a reference base value of 62.350.

A review of the ground survey is as follows.

A full day was spent determining magnetic field intensities of known rock types in the license area. Sulphide and ironstone specimens from around western Tasmania were also tested in order to determine what readings might be expected if variable (fluctuating) readings occurred.

As it were, a variable reading was observed in the afternoon of the second day of the programme on a 45 degree angle traverse of Davies Hill West following a stringline previously run out.

The variable reading proved to be a plate sized floater, or slab of basalt, lying half exposed on the northern slope of west Davies Hill, located about 40 metres vertical from the summit. Its position was marked with tape and retrieved for later analysis.

A little further up the hill near the summit, a series of repeated, variable readings was observed over a narrow strip of ground that was traced and found to extend approximately eighty metres in length along an east west strike.

Further exploration saw a series of variable readings being observed around the steep N W slopes of Davies Hill West.

Several high readings were noted in the range of 66.000 up to 68.950.

Though difficult to follow on account of the steep terrain and thick regrowth, the position of the high readings were marked with tape, revisited and found to repeat the same high readings.

Altogether approximately 40 kilometres of ground magnetic traverses were carried out over a three week programme, weather permitting, on the license area and ground adjacent to Zeehan Highway.

A repeat survey was completed in April 1997, with similar results. No variations were noted when the magnetometer was deployed over the ferrugenous agglomerate exposures discovered in January.

CONTENTS

TRENCHING AND SAMPLING

Five trenches ranging in size from 300mm x 600mm x 500mm to 1500mm x 1000mm x 1500mm have been hand excavated across west Davies Hill.

Trench sites were selected to test for bedrock depth, rock chip and soil sampling. Three trenches were excavated on the lower south side of West Davies Hill and two on the summit area over ground that had reported high variable readings.

Bedrock depth is near surface on the summit while on the lower slopes at least 1500mm soil cover can be expected. Clay covers the northern higher slopes to at least 1.5 metres depth.

Well over 100 rock specimens have been collected and identified from all over the license area. The majority of rock outcrop exposures noted throughout the southern license area are mudstone siltstones ranging from Tertiary to Devonian. Basalts are predominant in the centre. Pyrite mineralisation was noted in Tertiary mudstones found in Diamond Creek.

Twenty seven (27) soil and rock chip samples have been assayed to date, for Cu, Pb, Zn and Ag. Two relatively high ppm Zn assays were noted from samples collected from an area 250 metres south west of the high magnetic variations, defined on West Davies Hill. These two samples were an andesitic type basalt rock specimen and soil sample taken from the same site, they reported 115 ppm and 85 ppm respectively whilst the normal zinc average ppm is 40.

40 stream sediment samples have so far been collected from Diamond Creek. Assay has not been completed.

OUTCROP IDENTIFICATION

In January 1997 unusual rock exposures were noted by Ivan Stringer, exploration field hand, during field reconnaisance, at the base of a small dam at the bottom of Diamond Creek where it encounters the Zeehan Highway.

Hand sized specimens were collected and have subsequently been identified as highly vesicled, relatively young ironstone agglomerate, highly leached and considered unusual for the Lyell region, considering known geology.

The exposure appears to have happened as a result of the new course of the creek, where it skirts a small dam put in by the landowner in 1989.

It has scoured a section of ground approximately 20 sq. metres exposing a 300mm thick layer of ironstone debris just under the thin topsoil. A hand sized specimen was cut in half and assayed by C.M.T. laboratory, Queenstown. One half was kept for reference.

Assay results were:	Cu	0.002%
	Zn	<0.01%
	Pb	0.002%
	Au	<0.01 ppm
	Ag	<2.5 ppm
	Fe	36%

The specimens were found in abundance up to small boulder size. All specimens observed were highly leached and heavy for their size. Small particles of agglomerate inclusions ranging from grain size to thumbnail size are pitted throughout all specimens.

The sharp angular facets of many of these inclusions, indicate a relatively short transportation from the site of origin or they were formed as a result of hydro thermal solution placement in the stream bed at the location itself. Or possibly iron sulphate deposition.

Later investigations of the area, saw similar exposures being identified further north along Diamond Creek and in relative abundance.

IDENTIFICATION OF ROCK SPECIMENS

Several opinions have been received pertaining to the age and identification of the rock specimen found in Diamond Creek

"Looks volcanic, though could have been formed by hydrothermal solutions."
Murray Flitcroft Consultant Geologist

"First impression is that it's volcanic gossan"
Peter Benjamin Chief Geologist, Copper Mines of Tasmania

"Probably a ferro cementious solution formed within creek sediments between 5 and 40 million years ago, as a result of hydro thermal activity."
Ken Morrison Regional Exploration Manager, Copper Mines of Tasmania

"Looks like Iron Blow gossan".
Barry Butler Prospector/Manager

"A very old (Cambrian?) ironstone sediment rock formed as a result of iron solutions forming on creek beds, although highly leached, it's not volcanic".
Geologist, Henty Gold Mine

"Hard to tell. Could be volcanic, could be some type of ferro/iron type solution build up. Suffered severe leaching and would be hard to determine its age. Potassium argon dating would be useful, but results could vary due to different ages of the different mineral elements of solutions that formed it".
Isabelle Lamb Chief Geologist, City Link Project, Melbourne, Victoria

"I confer with Morrisons opinion. I have seen similar ferrugenous wads in a creek system at Balfour, associated with tin mineralisation."
Peter Olubas, Geologist

"Looks like volcanic breccia, but is obviously ferrougenous. There is visible minute gold in a quartz inclusion which appears unlike other quartz inclusions ie. older or more weathered."
G.D.R. Zaremba, Exploration Geologist/Mining Engineer - retired

METAL DETECTOR PROGRAMME

In March 1997 a metal programme was carried out in an attempt to confirm ground magnetometer magnetic variations, utilising another method.

A Coinmaster G.E.D. 5001 metal detector was used. Manu. No. 97386.

This device utilised a ground exclusion balance detector facility which enabled junk or ferrous signals to be discriminated out.The machine was in good service and the operator M. Byrne was proficient in its use. Its detection range was approximately 0.5 metre deep.

Following a marked route heading east over West Davies Hill, numerous low intensity signals were noted in a narrow trail, up over the hill to the summit. Three trenches were inspected and all reported low intensity signals.

From the summit region a route S.E. to Diamond Creek was traversed, low intensity signals were noted in three places along the way. A very high intensity reading was observed at the base of the root system of an old fallen myrtle tree, on the south side of the steep incline spur, that flanks Diamond Creek, opposite East Davies Hill, across the creek valley.

A pelican pick was used to dig away a foot deep hole through broken basalitic rock. The reading was observed to remain at the same high intensity.

Several handsize basalt rock specimens were collected and feldspar crystallisation was observed in high concentration.

A low intensity signal was also observed from a quartz tuff just outside the western boundary of the license.

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Galley Museum Queenstown
Mt. Lyell Museum Queenstown
Rosebery High Museum Rosebery
Department of Mineral Resources Hobart
Tasmap Burnie
Queenstown Library
State Library Hobart

Diamond Drilling Advice
T. Kerec - Diamond Drilling Contractor Burnie
A. Poke - Diamond Drilling Contractor Zeehan

Field Assistants employed:
I. Stringer, Queenstown
M. Byrne, Tullah
R. Wray-McCann, Queenstown
T. Stringer, Queenstown

Exploration Advice:
P. Vennini, Exploration Contractor, Wilmot
R. Wolfe, Small Miner, Tullah
F. Griffiths E/L Holder, Rosebery
B. Butler, E/L Holder, Queenstown
J. Smythe, Prospector, Wilmot
B. Wallace, Prospector, Queenstown
Parks and Wildlife, Queenstown

CONCLUSIONS

Our first year exploration programme has produced encouraging results that warrant further exploration.

The primary aim was to geochemically determine an area of prospective ground on the EL that was worthy of serious investigation.

This has been achieved.

We believe there is a body of rock previously unmapped, which exhibits an anomalous magnetic profile on West Davies Hill in the area N5345250 E378250.

Line mapping and magnetic imagery lend support to this claim.

Field work in this area suggests that evidence of the anomalous magnetic profile can be observed in two locations on either side of the steep northern and southern, slopes, utilising a ground magnetometer or metal detector.

Rock chip sampling in the vicinity reports low level zinc traces whilst trenching has revealed clay at least 1.5 metres deep covering a wide area.

The geological setting, steep topography and evidence of localised mass wasting and possible slumping add weight to the conclusion that the clay may well cover the source of the ironstone, pyrite and alluvial gold mineralisation that has been found in Diamond Creek and is therfore worthy of proper investigation.

We intend to widen our prospective area of interest and will test future samples collected for chromite, nickel, titanium, magnetite, scheelite and tin, as well as silver lead zinc.

EXPLORATION OVERVIEW

It is true that we have limited resources and capital and that as far as mineral exploration goes we are laymen. In a real sense all we have going for us, is a knowledge of the bush and the support of the Department of Mineral Resources.

As any experienced exploration geologist will tell you though, being out in the bush is generally how mineralisation is discovered. Technology is a big help, of course, though if field work is not carried out, then no matter how large the exploration budget is, mineralogical success will not eventuate.

The previous joint venture holders of the ground covering EL 28/95 (Pasminco, Norgold), collectively spent large sums of money to explore and ultimately renounce 66 square kilometres of largely untested ground, much of it residing in or flanking ground considered to be Mt. Read Volcanics type and worthy of investigation.

Effectively the previous exploration programme consisted of compiling a mineral occurrence and stream basemap, records research, an aerial magnetic survey and review, as well as two half day field traverses of the Henty River.

It should be noted that no geochemical assaying was carried out throughout the period, nor was any attempt made to visit sites on the Yolande River where very high ppm Zn, Ag and Pb assays were reported in a stream sediment survey carried out by Mt. Lyell in 1982, nor was any ground review carried out over anomalous sites interpreted by Leaman in his initial review of aeromagnetic line data in July 1993.

Our own interpretation, of Leamans report has, we contend, saved many hours of unnecessary track cutting and geochemical sampling across unprospective mudstones.

By following Leamans recommendations and interpretations we sincerely believe we have defined on the ground, verifiable magnetic evidence of the sub paralell anomalous body inferred by line mapping data and alluded to by Leaman.

There will, of course be differing views amongst professional corporate explorers pertaining to the aerial magnetic data interpretations concluded by Leaman, and confirmed by ourselves. It has to be said that subtle magnetic field variations are often only that.

We believe there is sufficient geophysical and geo chemical evidence to conclude the probable existence of a structurally connected, strongly magnetised sub body, that exhibits a strong magnetic profile and that appears to strike in an east west direction through the centre of the Davies Hill license. Magnetic evidence of this ‘connected’ sub body has been found at three locations separated over a distance of 1.5 kilometres within 200 metres north and south of N 5345000.

Each location is on high ground and west of Owen Lyell fault. Each magnetic variation can be traced in narrow north south strikes that appear to extend a minimum of 200 metres in length.

The area of the Zeehan Hwy variation has previously been explored with attempts at mechanised trenching and drilling known to have occurred. Basalts with mafic characteristics have been observed.

The Davies Hill variation/location reports evidence of Tertiary hydro thermal activity, or, iron sulphate deposition, in the guise of ferrugenous agglomerate, pyrites in mudstone and high ppm assays of zinc. Gold in fine traces is said to have been panned at the bottom of East Davies Hill.

The Lake Margaret road variation correlates with north/south trending geo chemical zinc and lead anomalies outlined in 1982. Drilling in the area in 1993 confirmed the presence of mineral indicators but results were inclusive/negative. It must be stated this last variation was found by accident during a wayward traverse of the creek system in the south east corner of the license.

Speak to almost any geologist in Tasmania and nearly all will admit they have never heard of Davies Hill, Western Tasmania.

This is not overly surprising when you consider not even Lyell region historians, including Hull, Sarson, Dawson and Thomas have never heard of it.

At just over 405 metres high, Davies Hill does not rate as a notable land form in the region, considering its location adjacent to the 1000 metre high West Coast Range, north of Queenstown. To the passing eye it is just another geographic blip on the horizon, when travelling to and fro from Zeehan.

When viewed, standing on the edge of the West Lyell opencut, Davies Hill is easily recognisable as the highest ground immediately north west of Philosophers Ridge.

It is very hard to unearth any exploration information about Davies Hill, prior to the 1940's. Early maps show no mention of the name, nor do any reports sighted. Even the origin of the name is unknown, as seems the case for Pearl Creek, Gold Creek and Diamond Creek.

The only mention of a Davies sighted in reference material, was a W. Davies, a visiting German metallurgist, who compiled a report on the dressing of tin ores at Mt. Bischoff in 1881.

Queenstown sawmiller, V. Bradshaw recalled a Davies who was head of the local Masonic Lodge, in the early days of the towns' formation, as well as a family of sawmillers, called Davies, who lived on the Lyell Highway, near the Jane River access track for many years.

It is likely the mason was the recipient of the honour, although when and by whom it was originally named, is still unclear.

It is known that the Kerrison family milked cows and farmed the area for over 40 years up to the early 60's. There were also several houses near the foot of Davies Hill as well as those at the Lake Margaret head adjacent to the present Zeehan Hwy. where 9 houses were lived in until the late 50's. There is no physical evidence left of any of these houses.

Around forty years ago a fierce bush fire swept through Davies Hill and left it a blackened waste land. Hundreds of old rainforest tree stumps logged in the 1920-30's by Mt. Lyell, were exposed as well as several narrow guage rail formations which were used to haul cut logs to a haulage located near the summit of west Davies Hill, that ran down to the rail track leading to the Penghana haulage, 2 miles south. This gravel and rail track eventually became part of Zeehan Hwy in 1963.

Evidence of the rail tracks is still clear in some areas, though most have been reclaimed by regrowth over the last 40 years. The tracks were used up to the late sixties for wallaby shooting by local shooters.

Ground reconnaisence located two tracks, one very old, and one constructed in the late 80's by a land owner, on the south face of east Davies Hill. Evidence of four long abandoned marijuana crops was noted near this track.

Prospecting activity is evident on the summit region of West Davies Hill. Shallow and obscure trenches and rock piles can just be made out.

Gold is also said to have been panned in fine traces by the Kerrisons, from a small tributary draining the south face of East Davies Hill, as told by local prospector Mr. B. Wallace. He also reports traces of chromite, panned from a small tributary of Diamond Creek, near the highway.

Mrs. M. Wolfe reported that the Wilson brothers, (railway fettlers) regularly panned and sluiced gold from Diamond Creek, over many years, on their weekends off.

Mr. Leo Dawson recollected a silver lead find in a creek south of Diamond Hill, by a war time prospector who had his gossan ore samples assayed by Mt. Lyell, reporting very high assays. Wallace also reported a silver lead find, in the Yolande River gorge, in rugged country west of the Zeehan Hwy. bridge, discovered by a local prospector after the war years. Good ore samples were sighted.

Mr. D. Smith recalled his conversations with Jack Stephens, the hermit prospector, who spent over 40 years living in camps at Diamond Hill and at Davies Hill. It was Stephens considered opinion, that the source of the gold in the creek had to come 'from up on Davies Hill'. Mr. L. Beams recollected that Stephens first prospected the area around 1935 with his father and others who had lived at Diamond Hill for some time.

A prospecting licence 1654G/40 was granted over 25 acres at Diamond Hill in the 1940. After returning from the war in the mid 40's, Stephens lived alone at Diamond Hill for many years. Beams recollects that Stephens often carried gold on him and would trade it to local shop keepers for supplies. The gold that Beams sighted was always fine alluvial as opposed to quartz.

Mr. V. Bradshaw was quoted as saying the present holders of the license 'had picked the eyes out of the lease'.

Beams and Wallace also told of a 2 foot wide silver lead outcrop that had been exposed during construction of the Zeehan Hwy. in 1962 in an area to the west of the license centre. Wallace reported that a mining company had drilled a hold approximately 300 metres south of the alleged exposure around the same time, though no records have been sighted of it.

Three excavator trenches south of the alleged location of the silver lead outcrop were also located, indicating definite previous prospecting interest.

For the record, magnetic field variations were noticed in a ground magnetometer traverse of the highway in the area in question. The physical area itself, correlates with magnetic image maps that indicate strongly magnetised body of porphries.

Pyrite was noted in a small sample of quartz schist found adjacent to the highway, although its source could not be identified.

Wallace also reported his belief in the existence of the alleged silver lead extending at least 150 metres in a north south strike, paralell to the highway and, attested to having sighted strong evidence of lead mineralisation exposed by a D8 bulldozer, that cut a track down a gully next to the highway, to pull out an overturned concrete truck, in the early 70's.

Surface basalt specimens collected from the location show a deep bluish tinge, indicating alteration by heat, with small metallic like inclusions evident under a 10 x glass.

Copper Mines of Tasmania holds the ground in question and has been made aware of all details of the alleged exposure.

Immediately to the east of the license a gold in quartz occurrence was mapped by Mt. Lyell in 1981, as well as a series of north south trending Zn and Pb soil anomalies. The physical area of these anomalous Zn and Pb sites correlate with image maps that indicate strongly magnetised porphry bodies.

In 1993 RGC/BHP targeted the Zn Pb anomalies with a 350 metre long diamond drill hole that missed its target. The hole came to within 50 metres of the license boundary and was reported to have produced chalco pyrite blebs and mineral indicators only. No further work was carried out.

Gold has been panned from creek systems immediately north, east, south and west of Davies Hill, including Gold, Lennox, Diamond, Pearl and West Queen creeks.

Barite veins were mined 300 metres south of the southern license boundary during the last war as a source of optical sights for munitions.

The license area encompasses an area of ground flanking the Zeehan Hwy. that is locally referred to as Lightning Ridge as a result of the abnormal incidence of lightning strikes in the area that would regular winter power blackouts. H.E.C. coined the name during the 70's and 80's.

Lighting is attracted to iron and an abstract theory was put by A. Poke that the recurring strikes are a natural phenomena caused as a result of a large iron presence somewhere on Davies Hill. Numerous scorched upturned trees indicate strikes occur on a regular basis.

Abstract geological theories are of course only what people make of them. The lightning strike theory is probably no more abstract than the geological theories of a Sydney clergyman of the 1840's, William Branwhite Clarke, who predicted that if gold was found in Tasmania, it would be found in the west.

Branwhite Clarke had studied at Cambridge University, under the famous geologist Professor Sedgewick, whose name adorns Sedgewick Bluff, 2 kms east of Davies Hill, as well as Mt. Sedgewick, the highest peak in the Philosophers section of the west coast range.

He had postulated a geologic theory that gold would be found in Tasmania where slate or schist with a north south strike existed near certain hornblende rocks along the 146th meridian of longitude. Many 1850's and 1860's gold prospectors were known at the time to be influenced by Clarke's long held theory.

Davies Hill lies approximately 20 klms to the west of the 146th meridian. It comprises Cambrian felsic quartz hornblende porphries with a north south strike. Nearby Cambrian to Devonian and Silurian greywackes and other mudstones exhibit slate characteristics. These exposures generally trend north south.

EXPENDITURE

Field work has been completed with minimum environmental impact and in accordance with the spirit of the Act. Expenditure has been contained throughout the year by completing all field and research work ourselves, with a prudent view to conserving our budget for deployment on professional surveying services, proper gridding, comprehensive infill assaying and specific potential survey.

We have procurred a portable petrol drill capable of drilling to five metres depth enabling us to carry out comprehensive below surface geochemical assays across the area of interest.

We will widen our prospective area of interest and will test future samples collected for chromite, nickel, barite, magnetite, tin and scheelite as well as silver lead zinc.

Whilst it is true that we have limited resources, we do not lack in committment.

Though we are not geophysicists or geologists, we are determined men, prepared to commit our resources, in order to evaluate an old prospectors geological theory, without going broke in the process.

Exploration is inherently expensive and time consuming. By prudency we have found it possible to carry out the first year work programme for around $3000 including license costs, hire of equipment, assay, research etc. Large savings were made on labour hire involving over forty separate traverses across the license area.

The license expenditure shortfall is to be made up by the procurement of a Cobra petrol drill and extension rods - $1200 as well as the services of a professional surveyor for two days.

This will enable us to meet the minimum 1st year expenditure of $5000.

Over the 4 year extension period we are confident we will delineate several drill hole sites .

At this point in time, we do not have the financial capacity to risk a wildcat one hole drilling programme (having been quoted around $35,000 to complete a 400 metre NQ drill hole), without proper geochemical evaluation of potential drill sites. To attempt to do so would be folly.

LAND TENURE

1. Council Reserve
2. Crown
3. Crown
4. Crown
5. Private - B. Wallace
6. Crown
7. Crown
8. Private - B. Hedland
9. Crown
10. Private - G. McCaulay
11. Private - J. Webb
12. Private - J. Wray McCann
13. Crown
14. Crown
15. Federal Government
16. Private - L. Beams
17. Private - A. Beams
18. Private - B. Dawes
19. Private - W. Tiddy

GEOLOGICAL ADVICE

Professional:

M. Flitcroft	Geologist
I. Lamb	Geologist
P. Olubus	Geologist
G.D.R. Zaremba	Exploration/Mining Consultant (retired)
K. Morrison	Exploration Geologist

Local:

B. Wallace
L. Beams
D. Smith
B. Dawes
L. Dawson
J. Sarson
P. Hull
H. Dean
B. Butler
V. Bradshaw

Maps Used:
Tasmap Lyell 27 1.25000 (1987)
Tasmap Geological Series Queenstown 1.25000 (1989)
Tasmap B/W Arial 60 x 60 cm 1.6000 (1984)
Leaman Yolande Grid Magnetic Maps E/L 25/91 (1993)
Topography E/L Holdings (1984)
Stream Sediment/Rock Chip Sampling Yolande E/L 9/66 Lyell (1980)
Pb Zn Soil Anomaly Map Sedgewick Grid E/L 9/72 Lyell (1982)
Yolande Area Stream/Mineral Occurrence Base Map E/L 25/91 Pasminco (1994)
Lyell E/L Holdings Mt. Lyell M & R Co. (1902) Mining Lease Map 5
Tasmanian Mineral Resources Map 1.100.000 (1988)
Mineral Resources Map, Lodes and Alluvial Deposits 1.1000,000 (1968)

GLOSSARY

Rock Types

Andesitic	A fine grained rock generally similar to rhyolite but lacking quartz phenocrysts.
Porphrytic	An igneous rock consisting of coarse mineral grains scattered through a mixtureog fine mineral grains.
Hornblende	One of the 6 common minerals. Common in metamorphic and igneous rocks. Dark green to black in colour with long six sided crystals, fibres or irregular grains.
Feldspar	One of the common minerals. Prism shaped crystals and granular masses.
Volcanic	Extrusive igneous rock formed by the cooling of magma poured out onto the earth's surface.
Tuff	An extrusive rock formed by the agglomeration of small volcanic particles ("ash").
Conglomerate	Cemented particles, somewhat rounded, considerable percentage of pebble size.
Breccia	Fragments conspicuously angular, with binding cement.
Sandstone	Rounded fragments of sand size 0.02 to 2 mm, binding cement.
Greywacke	Fragments of quartz, feldspar, rock fragments of any kind, with considerable clay.
Siltstone	Chiefly silt particles, some clay.

Geological Terms

Geology	The science of the earth.
Environmental Geology	The application of geology to the problems involved in the interaction between man and the rest of the earth.
Exposure	A place where solid rock is exposed at earth's surface.

Fault	A fracture along which the opposite sides have been displaced relative to each other.
Geosyncline	A great trough that has received thick deposits of sediment during its slow subsidence through long geologic periods.
Leaching	The continued removal, by water, of soluble matter from regolith or bedrock.
Ore	An aggregate of minerals from which one or more materials can be extracted profitable.