



JAGUAR MINERALS LTD
ACN 107 159 713

Wilson River Project
Exploration Licence 23/2003

Annual Report for the Period
28/11/2003 – 28/11/2004

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Key Words:

Nickel sulphides
Avebury Nickel deposit
DIGHEM anomalies
Serpentinised ultramafic rocks

Executive Summary

The Wilson River Project is located in NW Tasmania about 65km SW of Burnie .The Wilson River area contains serpentinised ultramafic rocks that are part of a belt that extends south from Arthur Dam on the Waratah to Corinna Road and have not been previously explored for nickel sulphides. It is the intention of Jaguar Minerals to explore the area for nickel by

- reviewing and compilation of previous exploration data, preparation of access tracks
- low impact soil sampling, possibly by rehabilitation of the old Aberfoyle grid in the area
- and drilling.

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1. Introduction

The Wilson River Project is located in NW Tasmania about 65km SW of Burnie and 5km SE of Luina, the township for the historical Cleveland Sn-Cu mine. The principal objective at this project is to discover nickel sulphides, associated with DIGHEM anomalies, within serpentinised ultramafic rocks.

It is believed that the Wilson River area has similarities to the geological setting at the Avebury Nickel deposit near Zeehan and it is this deposit that is being used as a model for exploration in the Project area.

2. Location

EL 23/2003, Wilson River, NW Tasmania is located, SE of the old Cleveland mine in the headwaters of the Wilson River.

3. Tenement Summary

The Wilson River project consists of ELA 23/2003 with an area of 9 km². Jaguar Minerals obtained the tenement from Herald Resources who had an option to purchase agreement with the tenement holder, New Challenge Resources Pty Ltd. Land tenure within EL 23/2003 is of Meredith Range Regional Reserve with a very small area on the extreme eastern boundary as Forest Communities Managed by Prescription.

4. Geology

4.1 Regional Geology

Widely distributed Cambrian deep-sea volcanics with associated ultramafic bodies and sedimentary rocks are found in the Luina-Magnet-Wilson River district. These volcanic-ultramafic-sedimentary rocks were disrupted in the late Cambrian Tyennan Orogeny and thrust west. Later, in the Devonian, the package was overprinted by the effects of the Meredith Granite intrusion and structural dislocation. The Meredith Granite, an I-type granite, appears to have introduced both Sn-W-Bi-Mo into the area and redistributed other metals, such as Ni & Pb-Zn-Cu into stratabound replacement and discordant vein styles. The Avebury Nickel deposit near Zeehan, that has been recently discovered and is being readied for development by Allegiance Mining, provides a new model on which to base nickel exploration in NW Tasmania and it is this model that is being pursued by New Company.

4.2 Local Geology

The Wilson River area contains serpentinised ultramafic rocks that are part of a belt that extends south from Arthur Dam on the Waratah to Corinna Road and have not been previously explored for nickel sulphides. The ultramafics comprise peridotite and pyroxenite and occur within an embayment of the Devonian Meredith Granite. Based on the Avebury model, the ultramafics are prospective where they are intruded by the granite which may cause extensive alteration and remobilisation of nickel sulphides. Hydrothermal fluids from the granite introduce sulphur which combines with Ni and then becomes concentrated in favourable locations.

4.3 Mineralisation

Past exploration in the Luina area, especially between Cleveland Sn-Cu mine and the Magnet Pb-Ag-Zn mine, both now closed, was undertaken by Aberfoyle Exploration in the period 1963 to 1993. EZ, Cleveland Tin, Comstaff, BHP, Placer Exploration, Pasmenco/MPI Gold investigated the Magnet Mine and Environs for a range of lead-zinc, copper, tin and gold targets. Nickel was not a significant target for any past explorer and remains effectively unexplored.

The Wilson River area contains serpentinised rocks that have not been well explored for nickel and a model based on the recently discovered Avebury deposit, near Zeehan, is considered applicable with “pendant” style nickel deposits the target. Additionally, potential for fluorite-quartz veins and Sn-W mineralisation exists within the Devonian Meredith Granite area both within the granite and within country rock pendants.

The serpentinites are probably part of a belt of ultramafic rocks that extend south from Arthur Dam on the Waratah to Corinna Road. They comprise peridotite and pyroxenite and are prospective based on the Avebury nickel model but have not been explored for nickel previously as far as is known.

5 Work Completed

Delays in the listing of Jaguar Minerals on the ASX and raising of subsequent finances have delayed the start of exploration work on the tenement. Work completed included a review of historic work, review of DIGHEM data and planning of the exploration work program.

5.1 Site inspection

A site visit by Jaguar personnel of the tenement was completed. Vehicle and personal access to the tenement was assessed. Vehicle access is not possible and the tenement can only be reached by a 5km walk along the Betts track. See the accompanying photo. The track is in good condition and with minor cleaning up

of fallen branches etc. use could be made of four wheel motor bikes to move people and equipment into the area. Betts track provides a route right into the heart of the tenement. Once on the tenement movement of personal is restricted to a button grass plain. The rest of the tenement is covered by dense forest where sampling and mapping will only be possible once a grid of cut lines has been established, see the accompanying photos.

5.2 Review of past work

5.2.1 Mineral prospects at Wilson River 23/2003

5.2.1.1 Circular Feature, south of Betts Track

An unusual Circular Feature, with a diameter of 600m exists some 5km SE of Cleveland tin mine, at AMG AGD66 E367 500 N54 01 700 (Young, 1979). This feature is within Wilson River EL 23/2003. It lies within the headwaters of the Wilson River . The Circular Feature is not a geological boundary but is a topographic feature that is highly transgressive, and straddles the contact between the granite and Cambrian volcanics/sediments .

The feature coincides with a mapped embayment of the Meredith Granite (Late Devonian, K/Ar 350Ma) and mafic/ultramafic rocks and some DIGHEM anomalies. The granitic rocks vary from aplites to equigranular phenocryst rich granite and appears to be biotite depleted near the ultramafic contact; the granites are magnetically noisy. The basic volcanic in the area is altered into pale to dark grey-green chloritic rocks with common disseminated ilmenite and clasts. The serpentinite is dark green-black, magnetite rich and silicified. Derivation from peridotite is indicated by petrography (Young, 1979).

The Circular Feature was originally interpreted using aerial photos by Aberfoyle Limited and the contact of the Meredith Granite was explored in 1978-1981 (Young, 1979, Joyce, 1980a,b, expired EL 16/78). Stream sediment samples with up to 480ppm Sn and 1,700ppm Zn were considered to be encouraging and to perhaps reflect a Cleveland style tin deposit (Young, 1979).

Aberfoyle then explored for Sn/W using stream sediment sampling, base of slope sampling, gridding, soils and rock sampling (Joyce, 1980a,b). The stream sediments with up to 1,700ppm Zn were attributed to an ultramafic source.

In 1980, DIGHEM was flown by Aberfoyle across the Circular Feature along the northern contact of the Meredith Granite in EL 16/78. The small survey, of 90 line kilometres, generated bedrock anomalies in the east described below.

After interpreting the DIGHEM, magnetics and rock sample data, Aberfoyle constructed, across the Circular Feature area, a grid (base line from Betts track)

with 5 cross lines spaced at 200m and 400m long. These were soil sampled at 20m intervals, with random rock chip sampling.

Although Aberfoyle assayed rock and soil samples for a range of elements (Sn, W, Cu, Pb, Zn, Rb, Sr, Bi, Mo, As) they did not analyse for Ni or Cr.

Ground Proton magnetometer survey indicates that the granite underlying the Circular Feature is noisy and stands out from the bulk of the Meredith Granite (Joyce, 1980a); this probably reflects absorbed mafics/serpentinite with refractory un-reactive magnetite becoming disseminated (compare Laverton, WA) (PJL). The ground magnetics also showed that about 1km east of the Circular Feature, is a strong magnetic response 500m wide. Soil geochemistry is weak with max Sn 24ppm but rock samples from a ridge of silicified, magnetite bearing, ultramafic are up to 2,100ppm; the area may contain skarn. (Joyce, 1980). The linear magnetic anomaly is related to outcropping magnetite and an air-photo lineament. Although rock samples gave a few encouraging results (max 2,100ppm Sn), grid soils were barely above background. Aberfoyle planned to undertake ground EM and geological mapping (Joyce, 1980).

5.2.2 DIGHEM anomalies

Surveys by Aberfoyle of the DIGHEM anomalies, with key A4 maps, are reported in Joyce, 1980b, 1981.

DIGHEM 10A: 1km north of Circular Feature, DIGHEM anomaly in open button grass plain in mafic ultramafic complex. Most outcrop is of microgabbro that is weakly magnetic. Serpentinite occurs in the east with 4,500nT magnetic anomaly (Joyce, 1981). Sn values are low. Zn is higher over the ultramafic (EL 16/78, Young 1979, Joyce, 1981)

DIGHEM 12A: Within magnetic anomaly, serpentinite with magnetite and asbestos veins occurs in the area of a circular feature in a button grass plain within a mafic/ultramafic sequence. Tin results are low.

Grid based geological observations and rock samples were collected in 1981 across EM anomaly 12A. On new grid lines N10 400, 10,300 and 10,200 between E10,950 and 11,350 ultrabasic rocks with serpentine and asbestos, gabbro, etc with various silicification/ chalcedony are reported. Sn, W, Cu, Pb, Zn, Rb Sr were assayed but not Ni, Cr (Joyce, 1981). One rock sample, on grid line N10,200 of chalcedonic silicified ultramafic at the granite contact contained 1,200ppm Pb, 1,300ppm Zn. One line of ground EM across DIGHEM anomaly 12A failed to show an anomaly (Joyce, 1981).

DIGHEM 14: Located 250m east of 14A. single line anomaly, very weak conductor, weak magnetic anomaly (Circular Feature), near granite/ultramafic contact, weak Sn max 60ppm in soils. (Joyce, 1980 7 1981)

DIGHEM 14A east: Centre of Circular Feature, 1 line anomaly, weak EM conductor, probably at granite/ultramafic contact, weak soil max 44ppm Sn, probably a "geology" anomaly. No encouragement (Joyce, 1980, 1981).

DIGHEM 15A: 1km WSW of Circular feature, single line anomaly, medium strength conductor, probably a contact between low/high resistivity at edge of swamp, or raft in granite. Appears to be of steep dip, 10m wide. The conductor extended south to the EM survey boundary (EL 16/78, Joyce, 1980, 1981). This is outside EL 23/2003 and warrants investigation as an embayment of ultramafic in granite with sulphide (PJL).

Rock sample results and grid are shown on Randell (1987) and Joyce (1981). None of the DIGHEM anomalies have been assessed as nickel targets.

5.2.3 Review of Tasmanian nickel deposits

In Tasmania several nickel sulphide deposits are hosted by ultramafic rocks and some have been intermittently mined. The nickel deposits occur in several areas, including Heazlewood, Zeehan, and Trial Harbour (Botrill & Brown, 2003).

These deposits can be divided into five distinct types of primary mineralisation;

- Avebury, Zeehan, high sulphidation Ni (pentlandite-pyrrhotite) ores
- Cuni-type, Zeehan, high sulphidation Ni-Cu-Pt (millerite-chalcopyrite-pyrite) ore
- Lord Brassy, low sulphidation Ni (heazlewoodite-pentlandite) ore
- Nickel Arsenide (gersdorffite-niccolite) ores
- Medium sulphidation Ni-Cu-Pt (pentlandite-pyrrhotite-chalcopyrite)
- Nickel laterites also formed due to the weathering of some primary deposits and ultramafic rocks.

Allegiance Mining NL has recently discovered the *Avebury* nickel deposit, six kms west of Zeehan, with some 4Mt @ 1.54% Ni containing +60,000t Ni. The ore is unique in that it is almost wholly composed of coarse-grained pentlandite which, when treated in a simple mill will produce a high-grade concentrate (22%Ni). There are indications, some 800m east of Avebury, of a second body of similar composition. A number of look-a-like prospects have been defined including Burbank, 4km W of Avebury, which has given similar geological, geochemical and geophysical signatures.

The Avebury deposits occur in concealed ultramafic associated with early Cambrian mafic rocks and sediments and volcanics (Crimson Creek Formation). The Heemskirk Granite, an S-type of Devonian (359Ma) age, outcrops about 1km east of the deposit. The granite also underlies the Avebury deposit and has probably caused remobilisation and concentration of nickel sulphide in the "pendant" rocks that it has intruded. The Zeehan area is complexly faulted and the Avebury deposit appears to coincide with an ENE-trend fault. The ultramafic

rocks are probably a SW-part of the Serpentine Hill ultramafics that contain the Cuni nickel-copper deposit in gabbro.

In addition, at *Melba Flats*, Allegiance has discovered a deposit of more conventional mineralogy. Intersections of 5% nickel are accompanied by copper, cobalt, platinum, palladium and gold. Melba Flats deposit has a series of remobilised nickel-copper-cobalt zones at five locations over a strike length of about 3.5km. At *Nickel Reward* at the southern end where most work has been carried out to date, a pipe like massive sulphide body has assays typically of +6% Ni, +3% Cu plus cobalt and 2 g/t combined platinum, paladium and gold.

5.2.4 Past exploration in the Luina Wilson River district

1953-66 BMR (AGSO now GA) ran self-potential and ground magnetic surveys; these were reviewed BMR (1963), Falvey (1966). The conclusions of the day that SP over Cleveland mineralisation was unhelpful was later shown to be incorrect. Rio Tinto also took an interest in the Cleveland mine area but details have not been researched.

1963 EZ, 1963-1989, EL 5/63, EL 1/68, EL 11/75, Cleveland/Waratah district Comstaff (Anglo American, Preussag, BHP joint venture) and ANZECO ran stream sediment sampling, mapping, soils sampling around the northern and eastern Meredith Granite contact (Shaw and Everett, 1985a,b). Various EM surveys and magnetic surveys were run. In 1981/83 they investigated the Deep Gully Creek anomaly and ran DIGHEM regionally that identified anomalies in Deep Gully Creek that were not further investigated (north of Wilson River ELA). Comstaff drilled two holes at Magnet MAG 1 -60/82, 278m; MAG 1 -60/82.5, 284m (Doris). BHP drilled BR1, on EL 5/63 in 1985 testing a DIGHEM anomaly at Butlers Road. 1963-195, Aberfoyle, Cleveland & Meredith Granite north contact. *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1963-1968 EL16/78 (A\$376,064 historic), EL 34/1982, EL 1/63, ML 27M/1971, ML 84M/1984: Exploration and evaluation of the Cleveland tin & copper operation commenced in 1968; it became Australia's second largest tin operation after Renison Tin mine. Aberfoyle/Cleveland Tin reconnaissance geology, gridding 42km, ground magnetics 21km, SP 8km, soil sampling, stream sediment sampling, 13 areas selected for more work.

- An SP anomaly 225m long, some 300m north of the mine was untested, and
- that an SP anomaly of the Henry's type located north and west of the mine was untested
- SP trend in *Deep Creek* is coincident with a Cu-Zn anomaly and this was developed as 9Cnorth (Ransom & Hunt, 1972). The review by Ransom and Hunt (1972) is definitive for the time. *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1968-76 Cominco-Aberfoyle JV diamond drilling (Cox 1969). No mineralisation was found outside the Cleveland mine lease. Assay data indicated that the Halls Formation and the Eastern Sediments are most prospective for Sn-Cu targets. *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1971 Hiatus in exploration with the Mineral Securities debacle. Cominco acquired 54% of Aberfoyle.

1974: Aberfoyle aeromagnetic helimag survey, 52m line spacing (Palmer 1975a,b)

1975: In 1975, Aberfoyle Exploration and Cominco, stream sediment geochemistry and geological mapping. This resulted in a focus on two areas, the *South Magnet Dam area* (Wombat Flat?) and the *Washington Hay* area. Initial reconnaissance soil sampling suggested good potential in the South Magnet Dam area (Palmer, 1975). Zinc anomalies south of Arthur Dam. Low copper values coincide with weakly higher Zn values along the strike of the serpentinised pyroxenite extending south from Arthur Dam. Major Cu (>1000ppm)-Zn (>1000ppm) and fluorine (max 2,400ppm) anomalies are associated with Cleveland Mine; Cleveland lodes have 5-10%CaF₂. This resulted in a focus on two areas, the *South Magnet Dam area* (Wombat Hill) and the *Washington Hay/Cleveland* area (Stuart Smith, 1974; Palmer, 1975). *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1976: Soil geochemical follow-up of weak stream geochemical anomalies in the *Washington Hay, South Magnet Dam and Wombat areas* (Ransom, 1976). Mapping in the *Magnet* area indicated moderate-hornfels arenaceous sediments with up to 10% magnetite (thin sections indicate primary?); tourmaline is present. Exploration was conducted at Washington Hay: cleared lines, South Magnet Dam, cleared lines; Wombat area, cleared lines, soil geochem Pb, Sn (max 500ppm) (Fig)

1977 EL1/63 was reduced into 2-parts; hiatus in regional exploration with most effort on the mine.

1978-79: Aberfoyle compiled previous work across the northern parts of the Meredith Granite (Comstaff and ANZECO) and then collected 360 stream sediment samples (6/sqkm) and assayed for Cu, Pb, Zn, Mo, As; Ni and Cr were not analysed. They outlined three Sn-W anomalies-*Contact Creek-Scheelite Creek* (WSW of Cleveland), Upper *Castray River*, and *Betts track circular features* (White, Taylor & Young, 1979; Joyce 1981; Sise, 1985). *This included the Circular Feature of the Wilson River.*

1978 South of the mine two long diamond drill holes, and UTEM survey NE and S of mine (repeated in 1983); north of the mine UTEM 4 loops showed Halls Formation continued (Tulip and Eadie, 1979); weak conductors defined Webster (1979).

1979 *Washington Hay prospect*, 2 DDH, revealed weak mineralisation in breccia; DIGHEM II flow across granite contact areas one anomaly defined and concluded as being due to gravel below Tertiary basalt. Stream sediment sampling. New grid in the *Magnet Range*, mapping of ultramafic, sandstone, chert and volcanics. Minor soil geochemistry (Ellis, 1980).

1978-79: Aberfoyle compiled previous work across the northern parts of the Meredith Granite (Comstaff and ANZECO) and then collected 360 stream sediment samples (6/sqkm) and assayed for Cu, Pb, Zn, Mo, As; Ni and Cr were not analysed. They outlined three Sn-W anomalies-*Contact Creek-Scheelite Creek* (WSW of Cleveland), *Upper Castray River*, and *Betts track circular features* (White, Taylor & Young, 1979; Joyce 1981; Sise, 1985)

1979-80: Aberfoyle then collected a further 236 stream sediment samples, 833 base of slope samples and 150 rock chip samples on EL16/78 (Ellis, 1980; Joyce, 1980, Sise, 1985). In January 1980, a DIGHEM II survey was conducted in two areas and anomalies generated on the northern contact of the Meredith Granite- in the *Betts Track area* and *the Contact Creek-Scheelite Creek/Mt Youngbuck area*. A range of DIGHEM anomalies were selected for follow-up (Joyce, 1980b). Magnetic and soil anomalies are present in both areas (Joyce, 1980). SIROTEM, ground mag, geochem at Mt Youngbuck. Soil geochem Sn, Cu, Zn, Pb and costeans RA4, RA6

1981 New colour photos 1:15,000 and 1:30,000 were flown; DDH (397m length) located 500m south of Cleveland mine, cut barren limestone in Eastern Sediments. Petrography confirmed picrite and peridotite serpentinitised (Ellis, 1981; McArthur 1981). In 1981, an EM-survey using DIGHEM II showed that the environment was generally resistive and magnetically active. Several EM anomalies were detected as conductive bedrock and overburden features, as well as due to culture. The resistivity technique delineated several low resistivity zones in bedrock that appear to warrant ground follow-up work (Dvorak & Vergos 1981)

1981 Government West Coast aeromagnetic survey (MRT)

1982: DIGHEM over entire Aberfoyle licence but little of significance was detected. The survey failed to detect remnant mineralisation in the crown pillar of Cleveland that extends to surface. A new interpretation of the geology at 1:10,000 was produced (McArthur 1982). Upper Castray River and Mt Youngbuck surveys (Sise, 1985).

1982-84: UTEM survey to NE and S of mine (repeated) and confirmed conductors at the contact of the Crescent Spur Sandstone and Halls Formation; best anomaly near South Falls Creek prospect (Randell, 1987). Focus was on the Foley Zone in the footwall of the Central mine sequence; minor gridding, mapping and sampling. Also Whyte River alluvials, Eastern Sediments and southern Halls Formation. *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1983: MRT survey of the Luina and Wombat Flat areas after excision from EL 1/63 (Collins, 1983). The area of the Arthur Dam prospect is not within the ELA Wilson River of NCR.

On EL34/1982, south of Cleveland, BHP drilled the Luina Godkin deposit with one hole (?) of 342m -55/139 (Doris). Aberfoyle and Billiton JV is reported in Randell (1987)

1984: Aberfoyle was distracted by discovery of Hellyer.

1985: Aberfoyle collated past work onto 1:10,000 plans including stream sediment geochemistry (according to Cox, 1987), reviewed DIGHEM and aeromag on EL 16/78 (Staltari) and reviewed Mt Stewart basemetal mineralisation. Around Cleveland mine, they reassessed 1979 UTEM and defined 2-trends south of the mine. This was confirmed by Dronseika (1985) Drilling recommended. *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1986: re-gridded EL34/82, magnetics.

1987 Review of past work and identification of exploration target areas at Washington Hay-Confidence-Godkin, and Anomaly G12 by Cox (1986) for Aberfoyle. *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1986-90: Exploration to the south west and south east of Cleveland.

Billiton/Aberfoyle EL 46/88, 34/82, gridded the Comstaff DIGHEM anomaly, mapping, ground mag, auger, rock chip and costeans at South Falls Creek, Falls Creek. Drilling returned poor Sn and basemetals. Relogging core and sampling Foleys Zone massive limestones (Randell, 1987). *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1989 Placer investigated areas around Betts Track and north to Magnet Creek on EL 47/88 that replaced Comstaff's EL5/63. Emphasis was on gold search in the volcanics (Ellis 1989). Aerial photo interpretation of geology. Stream sediment sampling for 5kg, -6mm active sediment for BLEG cyanide extractable Au, with also Ag, Cu and 1kg conventional stream sediment -80#, Cu, Pb, Zn, Bi, Sb, Sn, Ag. Anomalous sites were resampled and then detailed sampled. Anomalous areas included

- on Magnet Creek BLEG 32ppbAu, 0.5%Cu, supported by -80# basemetals (outside of Wilson River ELA)
- Arthur River BLEG 0.2ppbAu, 240ppbCu, 32ppbAg (Ellis, 1989).

1990-93: Renison EL 12/90, EL 15/90 investigated the area and discovered a new skarn at Whyte River. They undertook a regional gravity survey, and soil geochemistry at Deep Gully Grid discovering an anomaly near the Waratah River. *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1995 Data review, stream sediment survey, rock geochemistry at Magnet and Arthur Dam. MPI Gold undertook -80# and -16#BLEG stream sediment survey over mafic and ultramafic lithologies in the aureole of the Meredith Granite. They detected a geochemical anomaly SW of Arthur Dam with best values of 8ppb Au, 7ppb Sb associated with mafic to andesitic volcanics; analysed Cu, Pb, Zn, Au, Sb (no Ni)(Poltock, 1995). *It appears that no work was undertaken on the Circular Feature at Wilson River.*

1996-97, on ELs 48/94 (Waratah/Mt Bischoff), 49/94 (Whyte River, SW of Cleveland) & 17/93 (Luina), Pasminco Limited flew an aeromagnetic survey on 100m line spacing over the entire area (digital, UTS Geophysics). Ground magnetic surveys were conducted along Butlers Rd (3.5km) and Betts Track (0.8km) and geological mapping along Butlers Rd and Corinna Rd including 12 thin section petrographic descriptions. Regional stream sediment sampling. Mapping near Magnet Creek; petrographic descriptions Follow up ground mapping, ground magnetics (10.5km), stream sediment, and soil sampling and rock chip sampling of two costeans was undertaken (McGunnigle, 1996; McGunnigle & Basford, 1997). *It appears that no work was undertaken on the Circular Feature at Wilson River.*

Two drill holes at the Arthur Dam geochemical anomaly south of Mt Magnet where Pb-As anomalies were coincident. A single diamond drill tested a magnetic anomaly north of the Magnet mine and intersected magnetite. (McGunnigle, 1996; McGunnigle & Basford, 1997).

A GIS (MapInfo) study of previous stream sediment, rock chip and soil geochemistry was undertaken for Cu, Pb and Zn anomalies around Magnet Creek and Arthur Dam. The West Magnet magnetic anomaly was considered shallow with no strong base metal association. (Weber, 1998). MPI concluded that the Magnet lode could be traced for 900m along strike but that of this only 69m had been mined. A large (1800m x 400m) alteration zone of propylitic minerals encompasses the lode.

1996-2000 Mineral Resources Tasmania flew in-fill fixed wing aeromagnetic regional surveys across NW Tasmania (Kevron Geophysics) and stitched these into previous quality surveys by private companies; terrain clearance was a nominal 80m with line spacing 200m. The results are available in ER Mapper format.

2001 NASA's Shuttle flew high-altitude Side Look Radar in a swath 80km by 18km from the Balfour area to Renison Bell. (NCR has not been able to access this data.)

2002 In early 2002, MRT commissioned Geo Instruments to fly a helicopter-borne Hummingbird **EM survey** of several areas in western Tasmania. EM digital acquisition specs are:

Line spacing: 200m, orientation 90⁰true

Nominal flying height: 60m, 30m for the bird
 Data output: every 0.1 seconds or less, flying speed 40m/s
 Coplanar coil frequencies: 875, 6,606 and 34,133Hz

EL23/2003 is covered by the Meredith survey.

6 *Expenditure*

Table of expenditure 2003-2004

Description	Expenditure	Comment
Geological review	\$5500	New Challenge Resources Proprietary Limited
Salaries and oncosts	\$5351	Herald resources, Geological Review
Travel	\$423	Herald resources, Geological Review
Accommodation	\$177	Herald resources, Geological Review
Total	\$11451	

7 *Proposals for the next period*

The Wilson River area has geological similarities, ultramafics with peridotitic affinity intruded by Devonian granite, to the Avebury deposit near Zeehan. Previous exploration has not included nickel as one of the target elements and it is believed that the ground within the exploration licence is therefore prospective for nickel. The principal objective of exploration at Wilson River will be to discover nickel sulphides associated with DIGHEM (digital heliborne EM) anomalies and to test a 600m diameter circular feature within the EL. This circular feature is a topographic and multiple EM anomaly feature investigated by Aberfoyle for tin and zinc and a range of other elements, but they did not assay for nickel or chromium. It contains hornfelsed sediments, volcanics and serpentinite intersecting the aureole of the Meredith Granite and is probably underlain by granite.

It is the intention of Jaguar Minerals to explore the area for nickel by

- reviewing and compilation of previous exploration data, preparation of access tracks
- low impact soil sampling, possibly by rehabilitation of the old Aberfoyle grid in the area
- ground geophysics
- and drilling.

Access will be via Betts Track, that extends south from the Waratah to Corinna Road.

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8.1 BIBLIOGRAPHY OF OPEN FILE REPORTS

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 9FIG, 2APPX Map (50/100K) Cleveland Geographic Betts Track,
 Butlers Road, Corinna Road, Deep Gully Creek, Magnet Range, Waratah,
 Whyte River, Deposits Arthur Dam, Campbells Galena Prospect, Magnet,
 Mt Bischoff Keywords Basalt, Boninite, Carbonate Replacement
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 Deposits Arthur Dam, Cleveland, Falkners, Godkin, Gregory, Magnet, Six
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Photo 1. Betts track, main access route to the Wilson River Tenement



Photo 2. Wilson River tenement; aspect looking east along a small tributary of the Wilson River with button grass plain in the foreground and forest covered ultramafic ridge in the background



Photo 3. Dense vegetation over the ultramafic sub outcrop.