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FINAL REPORT
TO AUGUST 2005
ON
EXPLORATION LICENCE 1/2001
BEACONSFIELD, TASMANIA
NICKEL/COBALT LATERITE PROJECT
FOR
JERVOIS MINING LIMITED

August 2005

SUMMARY

Jervois Mining Limited was the successful tenderer for ETA 504 “Anderson’s Creek” in December 2000. The area of 32 square kilometres is environmentally sensitive and contains a number of reserves.

The economically important rock types of the area lie within the “Anderson’s Creek Ultramafic Complex” that hosts primary chromite and platinoid mineralisation as well as secondary (lateritic) nickel and cobalt.

Previous exploration for nickel laterite includes the drilling of 37 diamond drill holes by King Island Scheelite 1947 Ltd. in the late 1960’s and 116 air core and 8 diamond drill holes by Allegiance Mining N.L. in 1997. The latter company also metallurgically tested samples by high-pressure acid leach methods.

During the first two years of the licence, the air core holes were re-logged to conform with Jervois’ format; a number of drill hole samples were assayed for the nickel laterite suite of elements and for checking previous results; composite samples were collected and despatched to Reno, Nevada for testing; these samples were subjected to column leaching at atmospheric pressure and ambient temperature; and resources were recalculated, categorised by lithology.

Metallurgical testing at Reno was discontinued. However, a new process for atmospheric leaching of nickel laterites using hydrochloric acid rather than sulphuric acid is now being tested on Jervois’ Young NSW laterite samples with the intention of a flow on to the Beaconsfield laterites.

Since the company’s thrust was towards metallurgical testing of samples from Young, further field work at Beaconsfield was thought unnecessary until a successful process had been found.

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INTRODUCTION

Jervois Mining Limited control considerable resources of nickel/cobalt laterite in Eastern Australia mostly at Young, NSW but also at Beaconsfield, Tasmania. The majority of these resources have been sufficiently drilled to be in the Indicated Category. Hence little field work is required at this stage and the emphasis is on the metallurgical testwork of the laterites. The Beaconsfield laterites have insufficient tonnage to justify the capital needed for a "high pressure acid leach" system. Thus it is important that a cheaper yet efficient metallurgical system be found to treat the laterites.

TENEMENTS

Jervois gained Exploration Licence 1/2001 by being the successful tenderer for ETA 504 "Anderson's Creek". The tender was submitted in early December 2000 and accepted by Mineral Resources Tasmania on 20 December 2000.

The licence was issued on 14 April 2001 and was current until 13 April 2006. It covers an area of 32 square kilometres less various existing leases and reserves. The licence applies from the surface to 50 metres below the surface.

The area comprises (see Land Tenure Plan):

Anderson's Creek Forest Reserve
Peaked Hill Forest Reserve
Dans Hill Forest Reserve
Proposed Barnes Hill Conservation Area
Private Property
State/Multiple Use Forest
MDC Informal Reserve

GEOLOGY

The Cambrian Anderson's Creek Ultramafic Complex (ACUC) is the host of primary chromite and platinoid mineralisation associated with specific layers within the complex (A.R. Reed et al). Weathering of the ACUC has produced lateritic profiles that contain nickel and cobalt mineralisation. Erosion has produced Tertiary and Quaternary alluvial concentrations of heavy minerals, especially chromite and to a lesser extent osmiridium and other platinoids.

Reed et al state:

> "The Anderson's Creek Ultramafic Complex (ACUC) is one of 15 ultramafic complexes throughout Tasmania, the ACUC being the easternmost outcropping complex. All the ultramafic rocks are orthopyroxene-rich, separating them from the dominantly clinopyroxene-rich rocks normally

associated with mid-ocean ridge and back-arc environments. The mafic-ultramafic rocks are interpreted to have formed in a forearc setting .

"Rocks comprising the mafic-ultramafic complexes have been subdivided into three groups based on their mineralogy. These are: layered pyroxenite-dunite (LPD), layered dunite-harzburgite (LDH), and layered pyroxenite-peridotite and associated gabbro (LPG).

"Ultramafic-mafic rocks dominate the ACUC and can be subdivided into a layered plagioclase and norite to gabbronorite and a second unit typically comprising massive to layered orthopyroxenite to pyroxenite (websterite). Varying degrees of alteration of the original ultramafic mineral assemblages is ubiquitous, commonly masking the original rock composition.

"Geophysical data suggests that the ACUC is folded into an anticline with a western limb dipping west beneath allochthonous Proterozoic rocks, and an eastern limb dipping NE approximately concordant with the Beaconsfield stratigraphy. This interpretation is consistent with earlier descriptions of the ACUC forming an antiform, based on variations in the orientation of compositional layering. The age of the folding is unknown but its upright orientation and refolding of earlier D-S2 foliations within the ACUC best fit a Tabberabberan age.

"Several NW-trending and NE dipping Tabberabberan age faults also dissect the ACUC. These faults extend beyond the ACUC into Proterozoic and Palaeozoic rocks. These faults are rather acutely transgressive to the boundaries between the different rock groups, with Proterozoic and possibly early Palaeozoic allochthons emplaced prior to Tabberabberan faulting."

Other rock types within the complex include quartz-feldspar-biotite rocks, granite, rhodingite, metamorphics and some sediments.

"Tasmanian ultramafic successions are known to be the source of platinum group minerals, gold, copper and nickel. Layered dunite-harzburgite (LDH) contain iridium, osmium and ruthenium (±gold), whereas layered pyroxenite-dunite (LPD) rocks contain platinum, palladium and rhodium (±gold). There has been no systematic exploration of PGE in the ACUC, although alluvial concentrations of osmiridium (natural alloy of osmium and iridium) occur within Anderson's Creek."

Chromite and Iron have both been mined to a certain extent, the chromite from alluvial/eluvial deposits and the iron from concretionary and pisolitic hematitic and goethitic lateritic material.

GEOPHYSICS

Gravity

> "A prominent gravity low to the west of Beaconsfield lies over outcropping Anderson's Creek Ultramafic Complex (ACUC) and Permian sediments, consistent with serpentinised ultramafic rocks having a mean density of 2.5 t/m^3. The gravity low extends to the south of the outcropping ultramafics, supporting continuation of the body at depth, although this may also be in part due to Ordovician and Permian sedimentary rocks. Toward the western margins of the outcropping ultramafics the residual Bouguer anomaly becomes more positive, and the northern extension of the body as suggested by regional magnetics implies that the body may continue north under denser lithologies."

Magnetics

> "Regional aeromagnetics flown over the West Tamar district show a dominant NNW structural trend in the region. A long NNW-trending positive magnetic anomaly west of the River Tamar corresponds to the position of the ACUC. The aeromagnetics support the notion that the complex is greater in extent in the subsurface than the outcrop.
>
> "Closer analysis and enhancement of more detailed aeromagnetics flown by AGSO and the Beaconsfield Mine JV in 1988 has revealed the ACUC to be composed of several ultramafic bodies or one complexly faulted and/or folded body. Enhanced magnetics have shown the body to extend a long way north and south of its outcrop extent in the subsurface, relatively unchanged. The outcrop extents of the ultramafic complex to the north and south are marked by faults. Close to and within its outcrop extents the body seems to be divided by an approximately north-south trending fault. The eastern body itself seems to be separated by dextral strike-slip faulting, whilst the western body curves substantially toward the west before encountering a fault and reappearing further south. This fault also marks the southernmost extent of ultramafic outcrop"

PREVIOUS EXPLORATION

The history of exploration of the laterite potential has been competently recorded by Newnham in the Annual Report to April 1997, EL 10/96 for Allegiance Mining N.L. (Allegiance). The exploration by Allegiance is equally well documented in the Annual Report 1998 (although there are some data discrepancies between Progress Reports within this Annual Report).

Because Allegiance only held the rights to explore for nickel and cobalt laterite mineralisation, Newnham's assessment of reports on other mineralisation such as gold, platinoids and chromite has been less exhaustive. Whilst gold has not been

reported to occur much in the EL, chromite has been mined (in alluvials) and explored for by a number of companies and Mineral Resources Tasmania (MRT).

Previous explorers of the laterite deposits have drilled 161 holes. King Island Scheelite (1947) Ltd. (KIS) put down 37 diamond drill holes for approximately 580 metres in the late 1960's and Allegiance drilled 1178.4 metres in 116 aircore holes and eight diamond drill holes in 1997. Consequently, the main laterites have been drilled at a density of 100 to 150 metre centres. This is perfectly adequate for an indicated resource, and further definition drilling is not necessary at this stage.

ENVIRONMENT

Some background research had been initiated in the environmental situation when tendering for the ETA. Newnham (in Allegiance's Annual Report (1996-97)) outlines the Dan's Hill RAP (Recommended Area for Protection) which covers the whole of the Mt Vulcan resource and the eastern edge of Scott's Hill resource. Reference is also made to the Mt Vulcan – Simmonds Hill Australian Heritage Act Registered Entry which covers virtually the whole of the serpentinites of the ACUC. The prime reason for these areas is to protect two plant species:-

Tetratheca gunnii

Epacris virgata sensu stricto 'Beaconsfield'

that are listed as Endangered under the Commonwealth Environmental Protection and Biodiversity Conservation (EPBC) Act 1999. This act was passed after Allegiance's field activities.

Information on the occurrence etc. of these plants was forwarded to Jervois by MRT with the assistance of the Threatened Species Unit, Department of Primary Industries, Water and Environment.

Further correspondence with MRT has also been entered into regarding the plant disease "Phytophthora cinnamomi", changes to conservation areas and the "Beaconsfield Strategic Prospectivity Zone".

Correspondence with Environment Australia regarding the EPBC Act was also initiated.

WORK COMPLETED

Access & Compensation

The West Tamar Council were contacted in February 2001 regarding ownership of land of 16 portions that lie within the exploration licence. The Council replied promptly with 12 of the 16 owners names and addresses. The data are shown in the appendix and on plan BN-45 (Landholders).

Telephone conversation has been had with Donald Beams of Beams Bros. (Holdings) Pty Ltd., one of the central landholders and brother of the owner of the adjoining property.

Drilling

As forecast in the Tender Document, no drilling was proposed or carried out. The main laterites have been drilled at a density of 100 to 150 metre centres which is perfectly adequate for indicating resources.

The shed at Beaconsfield that contains the drill hole duplicate and residue samples was rented from Mr. Barry Adkins. The air core drill hole chip trays have been obtained from Allegiance.

The air core drill hole chip trays have been re-logged in the Jervois' standard format. The logs appear in the appendix. Magnetic susceptibility readings were taken over each chip tray metre interval.

Assaying

On a field inspection trip in January 2001, two channel samples were collected from a roadside drain cutting on Tattersalls Road between the Scotts Hill and Vulcan deposits. The samples represented:

B1 : Hematite/Limonite Zone
B2 : Saprolite Zone

The samples were assayed by AMDEL (Adelaide) for a suite of elements associated with nickel laterites. The results appear in the appendix.

The pulps for the first air core drilling programme by Allegiance were found in the Beaconsfield shed (Holes S001 to S051). All the samples from these holes that appear in the resource calculations were despatched for assay to ALS (Brisbane). 238 samples were assayed for the nickel laterite suite of elements. The results are recorded in the appendix and they appear in the drill logs (except the nickel and cobalt results which are the original Allegiance/AMDEL results).

Composite Sampling

In March 2001, six samples were composited to represent the main lithologies (limonite, saprolite and weathered serpentinite) that occur at Barnes Hill and at Scotts/Vulcan. The samples were taken from Allegiance air core drill hole residues held in the shed at Beaconsfield. Each sample was designed to weigh between 20 and 25 kg. Their compositions are shown in the table below.The samples were despatched to Reno, Nevada, USA for metallurgical testing.

SAMPLES COMPOSITED MARCH 2001 - BEACONSFIELD

Deposit	Lithology	Hole No	From	To	Width	%Ni	Weight	%NixWt	Av%Ni
BARNES	LIMONITE	S019	5	6	1	0.60	0.14	0.08	2kg
HILL		S026	12	16	4	0.38	8	3.04	samples
		S031	5	6	1	0.28	2	0.56	
		S033	6	7	1	0.27	2	0.54	
		S068	1	3	2	0.61	3.9	2.38	
		S079	1	2	1	0.49	2	0.98	(20.04kg)
		S091	2	3	1	0.23	2	0.46	0.40%
	SAPROLITE	S031	8	12	4	1.20	4	4.80	1kg
		S033	7	11	4	0.57	4	2.28	samples
		S039	5	8	3	1.16	3	3.47	
		S063	7	10	3	1.67	3	5.00	
		S069	7	11	4	0.73	4	2.93	(21kg)
		S070	14	17	3	0.76	3	2.28	0.99%
	W SERP	S019	10	11	1	0.84	1.5	1.26	1.5kg
		S027	17	19	2	0.78	3	2.34	samples
		S028	2	4	2	0.96	3	2.88	
		S039	8	9	1	0.94	1.5	1.41	
		S063	16	19	3	1.11	4.5	5.00	
		S065	4	6	2	0.60	2.9	1.74	
		S070	23	24	1	1.06	1.5	1.59	
		S079	2	3	1	0.65	1.5	0.98	(20.9kg)
		S087	4	5	1	0.89	1.5	1.34	0.88%
SCOTTS/	LIMONITE	S004	3	5	2	0.25	3.4	0.85	2kg
VULCAN		S006	5	8	3	0.26	6	1.56	samples
		S007	8	9	1	0.33	2	0.66	
		S012	1	3	2	0.72	3.1	2.23	
		S013	3	5	2	0.33	4	1.32	(20.5kg)
		S014	3	4	1	0.40	2	0.80	0.36%
	SAPROLITE	S006	8	9	1	0.40	1	0.40	1kg
		S007	9	13	4	0.31	4	1.24	samples
		S013	5	6	1	0.49	1	0.49	
		S014	8	10	2	0.85	2	1.70	
		S016	7	15	8	0.95	8	7.60	
		S107	2	6	4	0.59	4	2.36	(22kg)
		S115	1	3	2	1.11	2	2.22	0.73%
	W SERP	S014	2	3	1	0.67	1.5	1.01	1.5kg
		and	10	12	2	0.76	4.5	3.42	samples
		S016	16	17	1	1.24	1.5	1.86	
		S017	11	12	1	1.21	1.5	1.82	
		and	14	17	3	0.80	4.5	3.60	
		S103	7	8	1	0.99	1.5	1.49	
		S107	6	8	2	0.86	3	2.58	
		S113	7	9	2	0.74	3	2.22	(21.75kg)
		S115	3	3.5	0.5	1.28	0.75	0.96	0.87%

Metallurgy

Allegiance submitted nine composite samples to AMDEL for high pressure acid leach metallurgical testing (two from Scotts Hill, three from Mt Vulcan and four from Barnes Hill). The samples averaged 1.16% NiO (0.91%Ni) and 920 ppm Co. Lithologically – after re-logging – the samples were composed of:

1.5% Limonitic Clay
73.9% Saprolite
23.1% Weathered Serpentinite
1.5% Fresh Serpentinite

This composition is fairly close to the resources calculated below, although the nickel and cobalt grades are slightly higher.

The results of the HPAL testing were good (especially when considered as sighter tests) with high recoveries and low acid consumption. Tests were done at 240^0 and 260^0C producing the following average recoveries after two hours of leaching:

Temperature	Recovered Ni	Recovered Co	Acid Consumption (kg/t)
240^0	89%	83%	397
260^0	92%	93%	326

The six composite samples referred to above were subjected to column testing using acid at atmospheric pressure and ambient temperature conditions. Some proprietary reagents were also used. These tests were effectively sighter tests for a 15 tonne bulk sample, the taking of which had been proposed and budgeted.

Four sites were marked out for locations for potential bulk sampling for the 15 tonne of sample that would be collected and sent to Reno, Nevada, for metallurgical testing. However this avenue of testing was discontinued. The sites were to have been inspected by officers of DMR before any work was carried out.

RESULTS OF WORK COMPLETED

Access & Compensation

No agreements were entered into with landholders

Drilling

The re-logging of the Allegiance air core drill holes has categorised the lithologies of the intersections and hence the lithological content of the resources. Knowing the resource lithology is important for the metallurgical process being tested because recoveries are different for the different lithologies.

All the drill holes have been plotted on section at 1:25,000 scale (Vertical/Horizontal Ratio = 5) and all coordinates, plans and sections are in

GDA. The magnetic susceptibility profiles are shown on the sections. The sections are not included in this report, however the drill holes are shown on the topography plan and the resource plans.

Assaying

The two channel samples taken by Tattersalls Road returned low nickel assays of 0.10% and 0.09% Ni, but moderate scandium of 35 ppm Sc.

Comparisons have been made of the assay results for nickel and cobalt arrived at by AMDEL and ALS for the pulps of Allegiance`s air core drill hole samples. The table in the appendix shows a very consistent difference of 6% for both nickel and cobalt. At this stage it is not known which set is correct. The averaged results for the other elements analysed is as follows:

Al	3.08%	Fe	21.21%	S	136 ppm
As	<5 ppm	Mg	5.96%	Sc	17 ppm
Ca	0.17%	Mn	0.39%	Zn	175 ppm
Cr	1.58%	Mo	<5 ppm		
Cu	<5 ppm	Pb	<5 ppm		

Composite Sampling

The six composite samples despatched to Reno, Nevada were collected prior to the re-logging of the Allegiance chip trays. The samples were taken as representative of the different lithologies of the resources at Barnes Hill and Scotts/Vulcan. Since the re-logging, new resources were calculated resulting in slightly different nickel content however the difference is not large and the samples are considered to be representative of the resources:

Lithology	**Barnes Hill**		**Scotts/Vulcan**	
	Resource Grade	**Sample Grade**	**Resource Grade**	**Sample Grade**
Limonite	0.41% Ni	0.40% Ni	0.37% Ni	0.36% Ni
Saprolite	0.92% Ni	0.99% Ni	0.75% Ni	0.73% Ni
W. Serpentinite	0.83% Ni	0.88% Ni	0.81% Ni	0.87% Ni

Another lesser contributing factor to the slight variance in nickel grade was that seven of the 94 samples collected had less weight available than expected.

Metallurgy

The results of the column leaching tests were as follows:

Deposit	**Lithology**	**Recovery**
Barnes Hill	Limonitic Clay	40%
	Saprolite	84%
	Weathered Serpentinite	80%
Scotts/Vulcan	Limonitic Clay	40%
	Saprolite	80%
	Weathered Serpentinite	80%

As expected the upper limonitic clay zone returned relatively poor results but the recovery for the main resources of saprolite and weathered serpentinite were sufficiently encouraging for the next stage of metallurgical testing to be planned.

RESOURCE CALCULATIONS

Resources have been calculated using the Allegiance assay data. The lithologies are based on Jervois' re-logging of the Allegiance chip trays and the resources have been drawn up using those lithological categories. A summary of the resource is:

Lithology	Ni %	Co %	Tonnes	%Ni* Equivalent	Percentage Tonnes	Percentage Ni	Percentage Co
Hematite	0.63	0.12	167657	1.05	1.3%	1.0%	2.3%
Limonite	0.39	0.12	794699	0.81	6.4%	3.0%	11.3%
Saprolite	0.88	0.07	9213728	1.13	73.8%	77.7%	75.9%
Weathered Serpentinite	0.82	0.04	2301870	0.96	18.5%	18.3%	10.5%
Totals	**0.83**	**0.07**	**12477955**	**1.07**			

(* Ni equivalent = Ni% + 3.5 x Co%)

The individual calculation sheets can found in the appendix. The parameters used in the calculations were:

Area	Plan Polygonal blocks
Volume	Area x drill thickness
Density	1.8
Minimum Thickness	2m
Cut-off Grade	0.6%Ni Equivalent (=%Ni + 3.5 x %Co)
Assay Grade	Averaged per drill hole
Minimum Overburden	1m
Overburden Ratio	0.9:1

From the calculations above it can be extrapolated that 96% of the nickel and 86.4% of the cobalt occur in the saprolite and weathered serpentinite lithologies (the target of the metallurgical testing). Furthermore, the Barnes Hill saprolite and weathered serpentinite holds 8.3 million tonnes (66.8% of total tonnage) containing 72.5% of the nickel and 57.4% of the cobalt.

DISCUSSION

The Beaconsfield nickel/cobalt laterites have been well defined by previous explorers, King Island and Allegiance. It is not expected that the resources could be expanded to any great extent, certainly not doubled. On the other hand, there are

still some areas that can still be explored by drilling that could produce minor resource additions.

With regards to metallurgical testing of the laterites, Allegiance showed that HPAL produced good recoveries and Jervois' first round of APAL bench scale tests also gave good recoveries for saprolite and weathered serpentinite, the main litholigical components of the resource. When larger scale testing on Young, NSW saprolite and weathered serpentinite in large columns did not produce potentially economic results, the APAL approach was suspended. Jervois then tried an atmospheric chloride (as opposed to sulphuric acid) leaching approach which is currently on-going using Young laterites, with some success.

As can be seen, Jervois, over the last few years, has concentrated on finding an economic method of extracting nickel and cobalt from laterites in Eastern Australia. Without having a viable metallurgical process, it was considered that the resources it held at Beaconsfield and in New South Wales needed no further upgrading. Consequently little was spent on the ground at Beaconsfield resulting in an apparent shortfall of exploration expenditure (DMR were reluctant to accept metallurgical expenses to be attributed to EL 1/2001- ref. letter of 20 April 2004).

Finally, the environmental situation of the project should be briefly commented on. DMR would give no assurances that a mine could be developed at Beaconsfield mainly because of the occurrence in the area of two endangered species of plants. Environment Australia which administers the EPBC Act (1999) were also unhelpful. This aspect did not give the company any boost in confidence in its exploration effort.

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15 August 2005