

Pty Ltd

### Duncan Hay

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Monday 8 March, 2004

### CAPITAL STRUCTURE

ASX Code	INL
Share price	A\$0.11
Market capitalisation*	A\$27m
Listed shares	225m
Escrowed shares	24m
Unlisted options	13m
12 mth low-high (A¢)	1.8-17.5
12 mth volume	156.7m

\*Undiluted.

Source: IRESS

### DIRECTORS

Non-exec. Chairman	Kenneth Severs
CEO & MD	Philip Wood
CFO	Kieran Rodgers
Technical Director	John Moyes
Non-executive	Philip Evans
Non-executive	Gordon Toll
Non-executive	Ian Ross

### TOP 4 SHAREHOLDERS

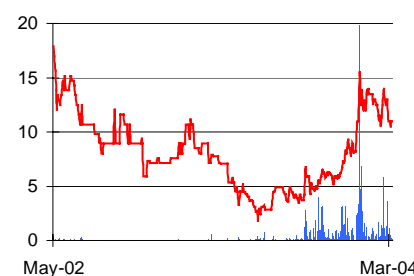
Orian Holding Corp. (IVN)	21.77%
Invia Custodian Pty Ltd (CIBC)	6.15%
Excel Mining Ltd	5.48%
Shellcove Investment Corp.	4.03%

Source: INL

### REGISTERED OFFICE

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### PRICE (A¢) & VOL (million)



Source: IRESS

## Intec Ltd [INL]

The Hellyer acquisition will allow INL to profitably commercialise its unique mineral processing technology, offering significant cost, performance and environmental benefits over existing alternatives.

WHIS estimates an A\$120m project NPV<sub>10%</sub> for Hellyer, but successful Intec Process commercialisation is far more significant.

### KEY POINTS

- **INL's wholly owned subsidiary, Intec Hellyer Metals Pty Ltd, has acquired the Hellyer polymetallic project, which comprises intellectual property, mining and exploration tenements, 11Mt of tailings and a 1.5Mt p.a. mill, located in northwest Tasmania.**
- **The acquisition price is A\$1.33m, which compares to an in situ, above ground value of around A\$1.6bn for the tailings.**
- **INL believes that its unique processing technology is the key to unlocking the value of the gold, silver, copper, lead and zinc contained in the Hellyer tailings.**
- **Pre-mined tailings treatment offers a low-cost opportunity for commercial-scale testing, as well as the potential for significant early cash flows.**
- *The Hellyer ore is refractory (i.e. metals difficult to extract) and therefore the tailings contain significant amounts of gold (0.9Moz), silver (31Moz), zinc (300,000t), lead (330,000t) and copper (22,000t).*
- *A six week campaign using Hellyer ore at INL's new 100-200kg/day pilot plant in Sydney is near completion, with results expected by end-MQ04.*
- *Shareholder Ivanhoe Mines funded the construction and commissioning of the pilot plant and also the initial campaign runs. In return Ivanhoe has received a technology licence on favourable terms.*
- *In addition, INL recently received approval for a A\$1.43m 'R&D Start Grant' from the Federal Government, to be used for the pilot plant project.*
- *Assuming the pilot plant testing proceeds as planned, INL will then construct a larger demonstration plant at Ammtec's new metallurgical facilities at Burnie, while full commercialisation (1Mt p.a.) is possible within 24 months.*
- *WHIS has estimated an NPV<sub>10%</sub> for a potential 1Mt p.a., 10 year Hellyer project of around A\$120m or A\$0.48 per share (undiluted), with annual after tax operating cash flows of around A\$40m.*
- **Although the cash flows from the proposed Intec-Hellyer operation are undoubtedly attractive, the economic implication of the successful commercialisation of INL's mineral processing technology is likely to be far more significant to shareholders.**

## INVESTMENT REVIEW

- ❑ **Over the last decade, INL has been developing a suite of low-cost, environmentally safe processing methods to produce precious and base metals on site from ores, concentrates and residues.**
- ❑ **INL is now positioned to commercialise its process in a relatively low risk manner, by using the polymetallic tailings of the Hellyer project – rather than in conjunction with an operating mine.**
- ❑ **INL is essentially developing a potentially lucrative, environmental clean-up operation, where much of the costs and risks have already been incurred (i.e. mining), although significant value still remains.**
- ❑ **The Intec Gold Process (IGP) has been developed to treat refractory (i.e. difficult to treat) gold concentrates and is being commercialised in conjunction with INL's largest shareholder, Orian Holding Corporation, wholly owned by Robert Friedland's Ivanhoe Mines group. Orian/Ivanhoe Mines has funded the A\$0.5m IGP pilot plant and also the commissioning phase that began during December 2003.**
- ❑ **INL expects its proprietary mineral processing technology to provide significant cost and environmental benefits when compared to existing alternatives – and if proved successful on a commercial scale, it could initiate industry-wide change.**

### Background

The mining industry is always seeking new processing methods that will lower costs and allow maximum on-site value-adding. An operation producing concentrates incurs higher unit transport costs (volume related) and pays downstream treatment and processing charges. However, a mine that produces a pure metal typically has a more readily marketable and more easily transported product – this is what the Intec Processes could allow.

Breakthroughs such as SX-EW (acid solvent extraction-electrowinning) for treating copper oxide ores and CIP (carbon-in-pulp) for treating non-refractory sulphide gold ores were prompted by ore availability and have significantly changed the face of the mining industry. The global inventory of gold deposits that have refractory minerals is large and these are ideal candidates for a new processing technology. Refractory deposits make up around a third of current world gold production and this is likely to increase as shallow oxide ores are mined out and deeper sulphide ores accessed.

However, there are a number of projects which have produced large quantities of metal-rich tailings, where much of the value remains due to technological restrictions and subsequent poor recoveries. The Intec Processes may provide a way of unlocking this value and the recently acquired Hellyer project is just one of many examples around the world.

### The Intec Processes

INL has developed a suite of processes for metal extraction, however, it is initially focusing on its patented Intec Gold Process (IGP), which has been proven at laboratory-scale to recover gold and other by-products from metallurgically complex, refractory gold concentrates (i.e. those containing arsenopyrite, pyrite and carbon).

The IGP typically involves the simultaneous oxidation and leaching of metals from a gravity/flotation concentrate by a halide-based solution, followed by precipitation of contaminants (which can be valuable, e.g. base metals) and then gold recovery onto activated carbon.

INL will be using a modified version of its IGP at Hellyer and rather than produce a concentrate, will simply treat the tailings, thus reducing overall processing costs.

Lab-scale testing has already achieved gold and silver recoveries significantly higher than the ~15% for a conventional cyanide leach, and INL's chloride-based leach circuit should also achieve very high extractions for zinc, lead and copper.

A 100-200kg/day IGP pilot plant was pre-commissioned in DQ03 and with campaign testing using Hellyer ore underway, results are expected by end-MQ04. The expected product suite is as follows:

- Zinc metal (~25,000t p.a. zinc)
- Gold dore (95%+ gold, ~40,000oz p.a. gold)
- Silver-lead bullion (i.e. 90% lead and 1% silver, ~2Moz p.a. silver, 30,000t p.a. lead)
- Copper oxychloride (~1,500t p.a. contained copper)

## INVESTMENT REVIEW

### Hellyer project acquisition

On 30 January 2004 INL's wholly owned subsidiary, Intec Hellyer Metals Pty Ltd, completed the purchase of the Hellyer polymetallic project, located in northwest Tasmania. The acquisition included several items of intellectual property, including the Mount Gordon Copper Process, mining and exploration tenements (including Que River and the Hellyer tailings dam) and the 1.5Mt p.a. Hellyer mill.

### Hellyer Tailings Measured Resource

	Grade	Contained	Price	IGV <sup>1</sup> (US\$m)	IGV (A\$m <sup>1,2</sup> )
Gold	2.6g/t	0.9Moz	US\$395/oz	356	474
Silver	88g/t	31Moz	US\$6.50/oz	202	269
Zinc	2.80%	300,000t	US\$1,000/t	300	400
Lead	3.00%	330,000t	US\$900/t	297	396
Copper	0.20%	22,000t	US\$2,900/t	64	85
			<b>Total</b>	<b>1,218</b>	<b>1,624</b>

The acquisition price of A\$1.33m compares to an in situ, above ground value for the 11Mt of tailings of around A\$1.6bn, or over 1000 times the acquisition price (today's prices and forex).

<sup>1</sup>In ground value, i.e. 100% of contained metal's value, <sup>2</sup>A\$/US\$ = 0.75

Source: INL and WHIS estimates

### Burnie metallurgical research and development facility

This has been acquired by ASX-listed Ammtec Ltd and will be the site of INL's proposed demonstration plant. It is expected that most of the existing Burnie staff will be retained by Ammtec.

### Hellyer mining and exploration tenements (including Que River and the Hellyer tailings dam)

The Hellyer tailings dam contains significant amounts of gold, zinc, lead, silver and copper that is importantly above ground, i.e. there will be no associated mining costs and handling costs should be low (less than A\$10 per tonne).

The high metal values in the tailings are due to the refractory nature of the original Hellyer ore. Only around 80% of the contained zinc was recovered and much less of the silver, gold and other base metals.

The Hellyer mill is centrally located in the Mount Read volcanic belt and although the region is highly prospective, and has yielded a number of world class orebodies (e.g. Mount Lyell, Rosebery, Hercules, Henty, Que River and Hellyer), there has been very little exploration undertaken in western Tasmania over the past decade.

Therefore, as exploration expenditure increases in Tasmania, INL is positioned to benefit from either new joint ventures on its 43km<sup>2</sup> of exploration tenements, or from toll treatment agreements with successful local explorers which do not have their own processing facilities.

### Hellyer mill

The well maintained 1.5Mt p.a. Hellyer mill will be used to grind the tailings for INL's hydrometallurgical plant. N.B. the Hellyer tailings are already at approximately 40µm and therefore limited further grinding will be required (to around 15-20µm) and the associated costs unlikely to exceed A\$5 per tonne.

### WHIS' Hellyer valuation

WHIS has conservatively modelled a 10 year, 1Mt p.a. Intec-Hellyer operation as follows:

Capital	After-tax cash flow	NPV <sub>10%</sub>	Per share <sup>2</sup>	Zinc product <sup>3</sup>
US\$75m	A\$30m p.a.	A\$97m	A\$0.39	Zinc oxide <sup>4</sup>
US\$100m	A\$40m p.a.	A\$120m	A\$0.48	Zinc metal

<sup>1</sup>Total costs of A\$30/t – includes ore handling, milling, processing and admin.

Source: INL and WHIS estimates

<sup>2</sup>Undiluted. N.B. prices and forex as above.

<sup>3</sup>Gold, silver, lead and copper products as noted on previous page.

<sup>4</sup>Conservatively assumes only 50% zinc payable for lower CAPEX zinc oxide facility than for zinc metal.

Obviously the capital requirements of the proposed Intec-Hellyer project are significant (approximately US\$100m or A\$130m), therefore, depending on the eventual sourcing of funds, there may be a fair amount of shareholder dilution if and when the operation commences.

However, INL shareholder Ivanhoe Mines Ltd is expected to provide significant support and given the highly bankable nature of the resource etc, no more than A\$10-20m of INL dilution seems likely.

Nevertheless, at current prices and forex, the operation is expected to produce after tax cash flows of around A\$40m p.a., with an NPV<sub>10%</sub> of A\$120m, which still represents around A8¢ and A24¢ per share respectively if the total number of listed and escrowed shares are doubled to 497m (e.g. would raise a further A\$27m equity at current price of A11¢).

**Although the cash flows from the proposed Intec-Hellyer operation are undoubtedly attractive, the economic implication of the successful commercialisation of INL's mineral processing technology is likely to be far more significant to shareholders.**

## INVESTMENT REVIEW

### **INL's commercialisation strategy**

With any new technology, most of the investment risk lies with commercialisation, and particularly how delays in the 'scaling-up' process will initially affect cash reserves and ultimately a company's ability to raise further equity. To address this issue, from an engineering and financial standpoint, INL is taking progressive and manageable process development steps.

#### **1. Pilot plant – construction and commissioning ✓**

INL constructed and successfully commissioned (ahead of schedule) its A\$0.5m, 100-200kg/day Intec Gold Process (IGP) pilot plant in Brookvale, northern Sydney during December 2003. The plant is being funded by Ivanhoe Mines and the Australian Government and was commissioned using material from Hellyer.

#### **2. Pilot plant – campaign using Hellyer material**

In February-March 2004 INL plans to run the plant on a campaign basis, also using material from Hellyer and funded by Ivanhoe Mines. This will take around 2 months, with results expected by end-MQ04.

#### **3. Burnie demonstration plant – construction, commissioning and campaign**

Once the Intec process has been demonstrated at the pilot plant scale, INL will design, construct and operate a polymetallic demonstration plant at the Burnie facility. Construction could probably commence end-2004. A demonstration plant project such as this would probably cost around A\$5-10m.

#### **4. Hellyer-Intec plant – construction, commissioning and production**

Once proved at a demonstration plant scale, a full plant could be constructed. This would cost in the order of A\$100-130m, depending on the relative economics of either intermediate or pure metal products.

### **The Hellyer tailings dam – looking northwest**



Source: INL

### **The Hellyer mill – looking south**



Source: INL

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