

Nemex Resources Ltd (NXR.ASX)

1 December 2014

Last Price: \$0.048

Next Generation Biometrics

Speculative Buy

Valuation: \$0.09

Overview: Nemex Resources Ltd (“Nemex”, “the Company”) is an Australian company with technology and mineral resource assets. It is presently focused on biometric security through a strategic investment in Wavefront Biometrics Technologies Pty Ltd (“WBT”). WBT is developing a new, disruptive biometric recognition technology utilising the eye’s corneal surface. The market for biometric recognition technologies is estimated to be worth US\$7billion.



Catalysts: Laboratory testing indicates WBT’s corneal recognition technology could deliver superior performance to existing commercial biometric benchmarks, the leader of which is iris recognition. Internal validation of the technology is expected to conclude in Q1 2015 and provide the basis of licensing discussions across multiple industries.

Hurdles: WBT’s technology has yet to be independently appraised and there is no guarantee lab performance can be replicated in a commercial setting. Further development of the technology requires additional capital. Partial nature of Nemex’s equity in the technology may impede its capacity to attract fair value in its share price.

Investment View: Nemex offers speculative exposure to the evolving global biometric security markets. We are attracted to the superior performance indicated by lab testing of WBT’s technology, yet recognise that independent validation stands ahead as a major value determinant. On a success case basis, our valuation of \$0.09/share represents an 87 per cent premium to recent trade. Whilst upcoming option expiries could influence near term performance, we initiate coverage with a ‘speculative buy’ recommendation in light of the Company’s growth opportunity.

Nemex Valuation Summary

Asset	Benchmark Range	Valuation Applied	NXR Interest	NXR Valuation
WBT	\$24-\$60m	US\$45m	51%	A\$25m
Mineral Licenses	N/A	-	-	-
Summary			<i>Total Valuation</i>	<i>A\$25m</i>
			<i>Share base</i>	<i>284m</i>
			<i>per Share</i>	<i>\$0.09</i>

Corporate Summary

Shares on Issue	183.5m
Other Securities	58.6m Options (5c, Dec 2014) 41.5m Options (5c, Dec 2015) 9m Performance Rights
Funding	\$0.75m
Market Cap	\$8.8m

Asset Overview

Title	Corneal Biometric Technology (30%)
Rights	Global
Status	Concept
Market Size	\$7billion
Patent Expiry	2034

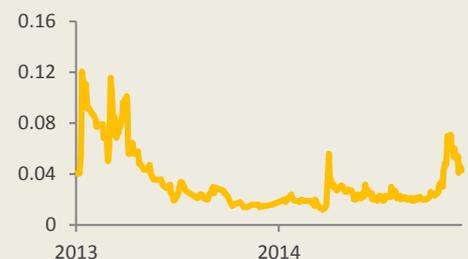
Management

Chairman	Patrick Flint
Director	Peter Turner
Director	Paul Jurman

Shareholders

Directors	5%
Top 20	46%

Share Price \$



Source: Bloomberg

Company Overview

Nemex Resources Limited (“Nemex”, “the Company”) is an Australian based company with technology and mineral resource assets. Its present focus is biometric security technologies via a conditional earn in agreement for a 51% interest in Wavefront Biometric Technologies Pty Ltd (“WBT”).

The Company’s mineral interests encompass exploration licenses in West Africa and Australia.

Nemex listed on the Australian Securities Exchange in 2011 raising \$6m for use in mineral exploration in Western Africa and Australia. Issued capital currently stands at approximately \$9.6 million, or 5c/share. Since signing an agreement with WBT in April 2014, issued capital has increased by \$1.3m, or 1c/share.

Biometric focus from April 2014

Asset Overview – Biometric Technology (30%)

In April 2014, Nemex secured a conditional agreement to invest in WBT, a private Australian Company developing biometric security systems. WBT was incorporated in 2007 for the purposes of commercializing research developed by its founders.

Nemex has subsequently invested \$1.325million in two tranches for a 30 per cent interest in WBT. The Company has options to increase its interest in WBT up to 51% by investing a further \$2.75million in two tranches, detailed in Table 1 below.

WBT’s primary asset is intellectual property surrounding a biometric recognition technology utilising the corneal topography within a person’s eye. The technology is known as ‘Corneal Specular Reflex Authentication’ of identity or ‘CSRA’

Agreement to acquire 51 per cent of WBT at \$4million pre money valuation

Patents covering the CSRA technology have been granted, for which potential commercial applications include personal identity authentication in several large markets.

Prior to Nemex’s initial investment, approximately \$800,000 was spent developing the technology.

Tranche	Investment	Interest	Total Interest	Date
1	\$700,000	20%	20%	May 15, 2014
2	\$625,000	10%	30%	September 8, 2014
3	\$1,000,000	10%	40%	TBD
4	\$1,750,000	11%	51%	TBD

Table 1: Nemex potential investments in WBT pending milestone accomplishments.
Sources: Nemex, wise-owl.

Background

Identity theft is the fastest growing crime in the US¹. During 2013, unauthorised abduction of utilities and mobile phone accounts nearly tripled². With biometric methods of identity verification providing a source of mitigation against these crimes, demand for biometric technologies is forecast to rise from \$7billion in 2012 to \$15billion in 2015, according to Biometrics Research Group.

Whilst biometric identification methods are not new, technological enhancements are now broadening their application, particularly at the consumer level. Laptops include fingerprint scanners and more recently, the fingerprint sensors have been integrated into select smartphones.

Currently there are a number of technologies on the market that implement biometric authentication. Fingerprint and voice recognition were amongst the first to be commercialised with the advent of computing technology in the 1970's. Iris and facial recognition were second generation technologies developed in the 1990's, whilst vein recognition represents an emerging system currently in the process of being commercialised.

Biometrics can mitigate the fastest growing crime in US

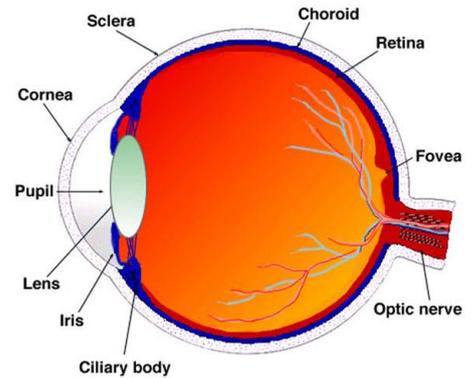


Figure 1: WBT's technology is focused on the corneal surface. Source: Nemex

Competing Biometric Technologies

<i>Facial</i>	Flexible, works when subject is unaware/easier to duplicate, less accurate
<i>Vein</i>	Almost impossible to replicate/emerging tech with variable results; body hair or tattoos could interfere
<i>Fingerprint</i>	Proven/well known, ease of use/prints can wear out or be copied; skin conditions can affect results
<i>Voice</i>	Ease of use, less intrusive/subject to numerous factors such as stress and speech rate can be fooled by high quality recordings
<i>Iris</i>	Unique to each person, extremely difficult to replicate/potential enrolment problems for people with dark irises, can be affected by lighting, iris texture can change with eye surgery
<i>Retina</i>	No known way to replicate/accuracy can be affected by disease, not user friendly, subject must be close to camera

Iris technology delivers the highest accuracy amongst commercially available biometric technologies

Table 2: List of biometric identity authentication modalities. Sources: Nemex, wise-owl, SANS Institute

Also at the emerging stages, WBT's CSRA technology represents a third generation of eye based biometric recognition. The technology is based on research by WBT's founders recognising that within the eye, corneal topography is unique to each individual. By measuring the pattern of light reflected off the eye's corneal surface, CSRA technology allows this unique trait to play a role in identity recognition.

Notes

1. Victim Identity Report (Dec 2013). US Department of Justice.
2. Identity Fraud Report (2014). Javelin Strategy and Research.

Features and Benefits

There is a distinct trade off between accuracy and user convenience with existing biometric recognition systems. Iris recognition systems developed in the late 1990's presently deliver the highest commercial standards in terms of accuracy, but rely on near infrared light sources and suffer limitations in their application for persons with dark irises, eye conditions or experiencing intoxication. Iris recognition systems are also at risk of compromise if presented with iris 'replica's'.

The CSRA technology aims to at least meet the accuracy standards of iris recognition, but overcome existing limitations. CSRA has no enrolment issues and a very low error rate. CSRA can be used in various light conditions as it uses an independent light source for verification. It relies on contour of the cornea rather than colour or external appearance, and is not impacted by the use of contact lenses.

Intrinsic within the technology is a 'reliable liveness' test, which significantly enhances its security levels. Reliable liveness testing is required to defeat fraudulent 'replay attacks' where identity data is stolen and then used fraudulently as means of authentication. Attempts to 'replicate' a person's corneal reading that is registered in the CSRA system are therefore rejected, rendering stolen biometric data useless.

Commercialisation Strategy

To date, WBT's development focus has been proving the concept behind the CSRA technology, developing supporting prototype hardware, and securing relevant Intellectual Property (IP) protections.

Prior to Nemex's investment, WBT expended \$150,000 on patenting and \$650,000 developing the concept in a laboratory setting. Laboratory testing indicated the technology could deliver superior levels of accuracy to existing commercial iris recognition standards.

The technology's capability was initially demonstrated using a static, desktop unit. Subsequent to Nemex's investment, potential for mobile applications of the technology have been demonstrated. Internal appraisals of its accuracy in 'miniature' form are expected to conclude in Q1 2015, after which independent validation of the technology will be sought. Validation is expected to require three months.

Prior to opening its technology for external validation, WBT has sought international patents to protect its IP. A US patent for biometric authentication using the eye was secured in May 2014 and another related patent is pending. An Australian patent application was accepted in September 2014, whilst filed applications in Europe,

CSRA lab performance superior to iris benchmark



Figure 2: Iris recognition technology is presently regarded as the leading commercial biometric technology, and systems pictured above have been implemented at international airports
Source: AOptix

US Patent secured May 2014

Canada and Japan remain pending. Granted patents provide their holder exclusive rights to exploit a technology for a period of 20 years.

Jurisdiction	Filing Number	Patent Status
US	8,718,335	Granted, May 2014
Europe	8854035.6	Application Filed
Japan	2010-535172	Application Filed
Canada	2744757	Application Filed
Australia	2008329544	Application Accepted

Table 3: Patent protections sought and held by WBT surrounding the CSRA technology. Sources: Nemex, wise-owl

WBT's subsequent commercialisation strategy is focused on licensing the technology to partners across multiple industries, utilising two product offerings. A static 'desktop' offering is envisaged for medium/high security, low traffic facilities, aircraft, vessels, plant, and weapons systems. A 'mobile' mode is envisaged for individuals to authenticate their identities for banking, business, law enforcement, border control, patient/doctor interactions.

WBT plans on commencing partnership discussions in Q1 2015 following completion of internal performance appraisals. Its initial focus will be platform/device vendors, mobile device management vendors and defence and physical security contractors.

Economics

Given the CSRA technology still requires commercial validation outside of a laboratory setting, the most relevant indication of its market potential is provided by transactions involving similar, yet commercially available biometric technologies.

Cumulative transaction values involving commercial biometric technologies over the past four years has neared \$2billion. Amongst the benchmarks below, targets with eye based technologies have commanded the highest revenues and market capitalisations. Overall, targets have been acquired for between 2x to 5x revenue.

Licensing partners sought to drive commercialisation



Figure 3: Prototype development is expected to conclude in early 2015 Source: Nemex

Commercialised biometric technology companies valued at 2x – 5x revenue

Comparable Transactions – Biometric Identification						
Acquirer	Target	Date	Price	Rev	Multiple	Technology
3M	Cogent	Aug-10	\$430m	\$116m	3.7x	Fingerprint, Face, Iris
Safran	L-1 Identity Solutions	Jul-11	\$1,009m	\$453m	2.2x	Fingerprint, Palm, Face, Iris
Apple	AuthenTec	Jul-12	\$356m	\$76m	4.7x	Fingerprint
Synaptic	Validity Solutions	Oct-13	\$92.5m	\$18m	5.3x	Fingerprint

Table 4: Comparable biometric identification transactions (in US dollars). Sources: Company SEC filings, wise-owl

Asset Overview – Mineral Licenses

Nemex was originally incorporated in September 2010 to acquire, explore and develop iron ore and other mineral projects in West Africa and Australia. We estimate the Company committed ~\$8million toward acquiring and developing its mineral resource portfolio, however subsequent deterioration in market and operating conditions have prompted a review of the portfolio. Nemex secured an agreement to divest a series of Cote d'Ivoire mineral exploration licenses for \$200,000 in September 2014. The Company retains its Téliimélé Iron Project in Guinea, and the Woodley Iron Project, Western Australia.

Téliimélé Iron Project, Guinea

The Téliimélé direct shipping ore (DSO) iron project is located in west Guinea, 110km from the coast. Exploration to date has identified an Inferred Resource of 258Million tonnes (Mt) at 37.3% Fe at the Boulere Prospect, which includes 16.7Mt at 55.1% Fe.

During fiscal year 2014, activities at the project focused on generating and securing funding for a fully-costed, two-stage pre-development plan including drilling additional T1 mineralisation and completing a Bankable Feasibility Study. The decline in iron ore prices has hampered the Company's ability to secure funding for future development. Additionally, field work has been restricted in the second half of the fiscal year due to the spread of the Ebola virus in Guinea and the onset of the wet season.

Woodley Iron Project, Western Australia

Woodley is located 600km north-east of Perth, Western Australia and covers an area of 420sq km. The project is presently absent of defined resources. In March 2012, Nemex had entered into a joint venture agreement with GWR Group (formerly known as Golden West Resources Ltd) for the Woodley project. Under this agreement, GWR Group can earn up to an 85 per cent interest in the project, with Nemex free carried to completion of a Bankable Feasibility Study. During fiscal year 2014, GWR Group completed additionally geological mapping and exploration of the site.

Minerals portfolio under review

Development challenged by market and operating conditions

Financial Performance

Nemex does not generate any revenues from operations as its shareholding in WBT and other mineral licenses are all development stage assets.

The Company is therefore reliant on external capital to finance operations, which to date it has sourced via equity offerings, and asset disposals. Issued capital presently stands at \$9.6million, of which \$1.3m has been raised since the announced agreement with WBT in April.

During September 2014, the Company sold its mineral interests in Côte d'Ivoire for \$200,000 in cash. At 31 October 2014 Nemex had cash of approximately \$750,000.

A further \$2.75million is required to increase its interest in WBT from current levels of 30 per cent to 51 per cent as per the earn in agreement. A series of 58.6million options are due to expire in December 2014 with a strike price of \$0.05/share. Exercise of the entire tranche would raise \$2.9million, sufficient to complete Nemex's earn in requirements.

Dec 14 options tranche could provide funding to support WBT earn in

Nemex Financial Summary

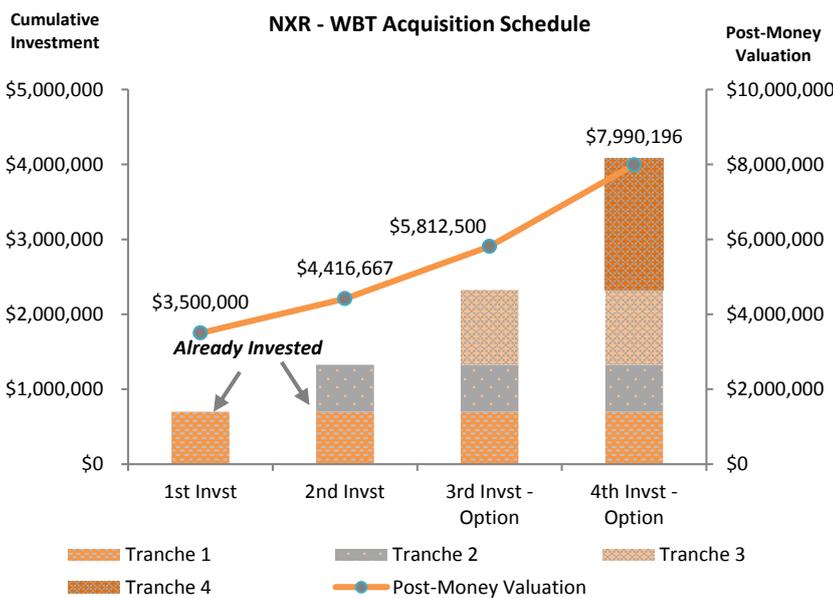
Issued Capital	\$9.6m	\$0.05/share
Remaining Funds	\$0.75m	
WBT Earn in Requirement	\$2.75m	To attain 51 per cent equity
Dec '14 Option Proceeds	\$2.9m	\$0.05/share exercise price, assumes full conversion
Dec '15 Option Proceeds	\$2m	

Table 5: December 2014 option tranche has potential to deliver funding required to attain 51 per cent WBT equity. Sources: Nemex, wise-owl

Valuation

Nemex Resources investment appeal rests in near term commercialisation of WBT's technology assets. We have therefore limited our appraisal of the Company's shares to its equity holding in WBT.

The existing agreement between Nemex Resources and WBT values WBT at ~\$8million, post investment. We have considered the potential future worth of WBT utilising a comparables approach.



Valuation limited to WBT shareholding

Figure 4: Current and potential future investment in WBT. Source: Nemex, wise-owl

There is presently a scarcity of listed comparables developing biometric technologies, and transactions involving pre commercial biometric assets. Therefore in conducting our valuation, we have broadened our universe to include transactions involving digital security technologies.

Benchmark median value US\$45million

Comparable Transactions – Pre-commercial Security/Software

Acquirer	Target	Date	Price (\$USm)	Solution
Imperva	SkyFence	Feb-14	\$60	Cloud storage security
FireEye	nPulse	May-14	\$60 (+\$10 earn-outs)	Data security
Proofpoint	NetCitadel	May-14	\$24	Automated security incident response
Proofpoint	Nexgate	Oct-14	\$35	Security & compliance
Mean			\$45	

Table 6: Comparable pre-commercial sales transactions (in US dollars). Sources: Company SEC filings, Venture Beat, TechCrunch, wise-owl

The comparable benchmarks attract valuations ranging from US\$24million to US\$60million, with a mid point of US\$45million. After considering WBT's development status relative to these benchmarks, we have applied a mid point valuation of US\$45million for WBT on a 100% basis.

Assuming Nemex executes its remaining investment tranches into WBT and that future options expires at \$0.05/share provides the bulk of funding, we value the Company's interest in WBT to be A\$25million, or \$0.09/share.

Nemex Valuation Summary

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Valuation \$0.09/share

Table 7: Valuation of NXR. Source: wise-owl

Investment View

Nemex Resources offers speculative exposure to evolving biometric security markets. We are attracted to the superior performance indicated by lab testing of the CSRA technology, yet recognise that mobile hardware development and independent validation stand ahead as value determinants.

On a success case basis, our valuation of \$0.09/share represents an 87 per cent premium to recent trade. Whilst upcoming option expiries could influence near term performance, we initiate coverage with a 'speculative buy' recommendation in light of the Company's growth opportunity.

Independent validation to be a major value determinant

Risks

Technical Risks

Performance of WBT technology is yet to be appraised outside of a laboratory setting and associated testing hardware remains under development. There is no guarantee independent tests will validate the technology's performance, or that laboratory performance can be replicated in a commercial context

Market Risks

Performance differentials versus existing biometric recognition technologies may not sufficiently overcome the cost, logistics and reputational hurdles required to stimulate market uptake.

Funding Risks

Nemex Resources and WBT are both reliant on external capital to finance operations. There is no guarantee funding will be available to advance development of WBT's technology. There is a risk future funding initiatives generate greater shareholder dilution than that forecast in our appraisal.

Corporate Risks

Nemex Resources partial interest in WBT and a lack of synergies with its existing mineral assets may impede the Company's ability to attract valuations that reflect the potential of its asset base.

The Bulls & The Bears



The Bulls Say

- Application of biometric technologies is broadening, particularly at the consumer device level
- Laboratory testing indicates WBT technology could deliver superior performances to existing commercial benchmarks
- Completion of internal performance appraisals in early 2015 provides a platform to commence licensing discussions
- Staged investment schedule with WBT provides a lower risk acquisition for Nemex shareholders
- Our valuation represents a significant premium to recent trading in Nemex's shares



The Bears Say

- Many competing biometric technologies are already commercially available or vying for development funds
- Laboratory performance of WBT's technology may not be replicated in a commercial setting
- Technology and hardware associated with prototypes currently under development have yet to be independently validated
- Partial nature of current holding in WBT and lack of synergies with mineral assets may impede valuations attracted by Nemex shares
- Upcoming option expiry may impact near term trade in Nemex shares

Management

Patrick Flint – Chairman, Nemex Resources

Mr Flint has been in the resources sector for the last 20 years, serving as director or company secretary of Australian Stock Exchange and Toronto Stock Exchange listed companies with projects in Australia, Africa and Asia. He is a Chartered Accountant

Peter Turner – Director, Nemex Resources

Dr Turner has more than 20 years of experience working on mineral deposits in Australian, Africa, and Asia. Dr Turner graduated from the University of Plymouth in 1990 with an Honors Degree in Applied Geology and PhD at the University of Portsmouth (UK) in 1995.

Paul Jurman – Director/Company Secretary, Nemex Resources

Mr. Jurman is a CPA with more than 10 years' experience being involved with various public traded companies in Australia serving primarily in company secretarial and financial roles.

Shanny Dyer – Chairperson, WBT

Dr Dyer has a strong history of managing early stage companies having previously served as Head of Commercialisation, University of Technology, Sydney. She has a PhD in Biochemistry and is a Graduate of the Institute of Company Directors.

Gary Blair – Consultant, WBT

Mr Blair has extensive experience with technology risk and security management having previously served as Chief Technical Officer at NAB and Executive General Manager – Cyber, Identity & Privacy at CBA.

Ed Sarver – Head of R&D, WBT

Dr Sarver is considered a world leader in developing technology for measuring the corneal signal and corneal modelling. Dr Sarver holds 16 patents in the area of corneal imaging and optical solutions for corneal and contact lens modelling.

Stephen Mason – Chief Technology Officer and Director, WBT

Mr Mason is an Optometrist whose experience led to the belief that the surface of the cornea can be used for authenticity identification. He has been an educator at the University Of New South Wales School Of Optometry and is the original inventor of the technology.

Glossary

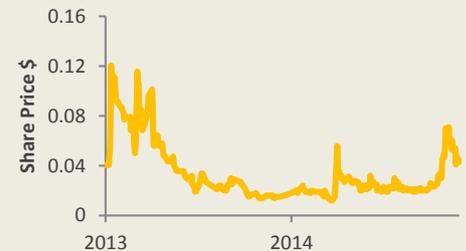
Buy	Increasing value of established business operations is likely to yield share price appreciation
Spec Buy	Increasing value of a new or developing business operation is likely to yield share price appreciation.
Hold	There exists an even balance of risks
Sell	There is elevated risk of share price depreciation.
Stop	Our recommended, pre determined sell price, to be executed if the share price fails to appreciate
Concept	An early stage of technological development characterised by design, controlled tests and prototyping
Commercial Trials	An intermediate stage of technological development characterised by testing with end users and prospective customers
Sales	An advanced stage of technological development where regulatory approvals have been secured and a commercial rollout has commenced

Archives

Nemex Resources Ltd (NXR.ASX)

Dec-14

Speculative Buy



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