

## Winchester Energy

# WEL

DEVELOPING NEWLY DISCOVERED MUSTANG OILFIELD

### Capital Structure

ASX Code: WEL	
Shares	431.4 m.
Options	34 m.
Price	\$ 0.030
Market Cap	\$ 12.9 m.
Cash (est Jun '19)	\$ 1.6 m.

### Valuation

Valuation	Success value			Risky value		
	A\$m.	\$/shr	Risk	A\$m.	\$/shr	
Cash	\$ 1.6	\$0.003	100%	\$ 1.6	\$0.003	
Production	\$ 3.0	\$0.005	70%	\$ 2.1	\$0.004	
Options	\$ 2.8	\$0.005	100%	\$ 2.8	\$0.005	
New Equity	\$ 2.5	\$0.004	96%	\$ 2.4	\$0.004	
Mustang	\$ 22	\$0.040	65%	\$ 9.6	\$0.017	
Spitfire	\$ 39	\$0.070	25%	\$ 9.4	\$0.017	
El Dorado	\$ 12	\$0.021	38%	\$ 3.8	\$0.007	
Lightning	\$ 16	\$0.028	45%	\$ 2.6	\$0.005	
Shale plays	\$ 20	\$0.036	0%	\$ -	\$ -	
Corporate	-\$ 4	-\$0.007	100%	-\$ 4.0	-\$0.007	
	\$115	\$0.204		\$ 30	\$0.054	

Source: Strachan Corporate

### Board

John Kopcheff	Non- Exec Chairman
Neville Henry	Managing Director
Peter Allchurch	Non-Exec Director
Larry Liu	Non-Exec Director

### Opinion

Winchester's Mustang oil discovery is producing ~300 BOPD. Additional, low-risk oil prospects on Nolan County permits lift combined Contingent and Prospective Resources to 7.8 mmbbls of oil at the P50 confidence level. Success would enable it to substantially boot-strap funding for expansion of oil production, adding value to its permits.

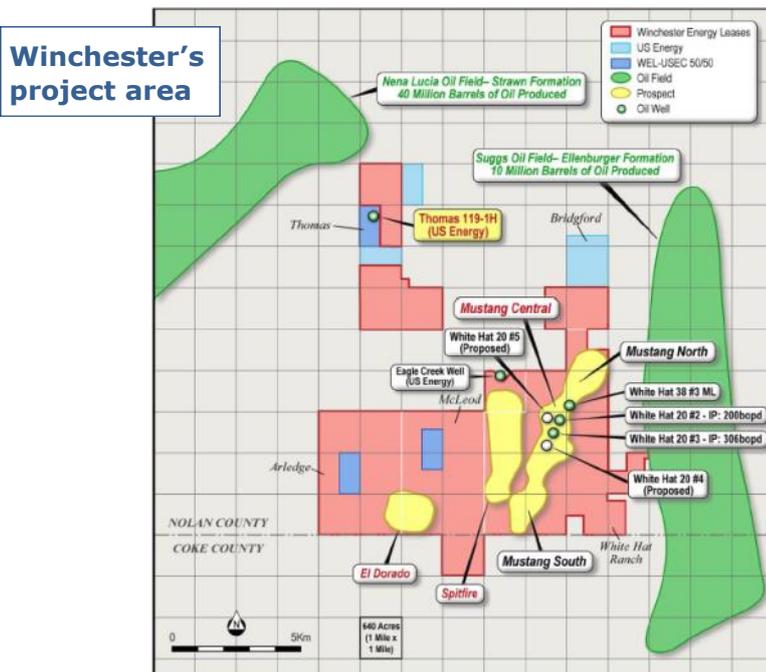
The company is assessed with a risky target value of 5.4 cps. At a modest value of US\$3,000 per acre the company would be valued at \$73 million or 16.5 cps, while exploration upside sees value at over 20 cps should all prospects be confirmed.

Peter Strachan



### Investment Drivers

- ◆ **RISKED VALUATION:** Strachan Corporate assesses a risky value for Winchester of \$30 million or 5.4 cents per share on a diluted basis. Exploration and appraisal success on newly identified conventional targets on the Permian Basin's eastern margin offers near-term upside valuation to over 12 cps.
- ◆ **NEWS FLOW:** Recently completed WH20#3 well delivered relatively strong initial production at over 300 BOPD from the Fry Sand in the Strawn Formation. Follow-up well WH20#4 in July '19, will be a 420 metre step-out along the target zone, while at least 35 additional drill locations have been identified at Mustang.
- ◆ **APPRAISAL & EXPLORATION:** Winchester added new equity in the June Q'19 to support exploration of Mustang, Spitfire and El Dorado prospects with a high probability of ongoing success. A P50 Resource of 2 mmboe and up to 5 mmboe at the P10 level of confidence is targeted at Mustang. Strachan Corporate assumes that Winchester retains 50% WI on subsequent prospects.
- ◆ **SELF-FUNDING:** Current permit production, estimated at ~400 BOPD translating to WI of 275 BOPD to Winchester, from which Strachan estimates an operating cash flow of ~A\$800,000 per quarter, enabling the company to boot-strap funding of development alongside farm-out support for high WI permits. Value should accrue as new plays are established thus lifting permit and production value multiples.
- ◆ **MULTIPLE PLAY TYPES IDENTIFIED:** Drilling has identified several play types that have either flowed oil or have potential to flow commercial oil with appropriate well completion.
- ◆ **MANAGEMENT:** Winchester is managed by industry professionals who have experience in the US oil-patch. Success at the Mustang prospect in the Strawn Formation indicates strong potential for high-rate extraction of oil from fraced horizontal well completions in sandstones & shales that extend eastward from the Permian Basin.



Source: Winchester

*+17,266 net acres on eastern flank of Midland Basin in Nolan County*

*Producing ~270 BOPD to its working interest (WI)*

*Oil migrates out of the Midland Basin into traps on Winchesters permits*

*Funded for upcoming Mustang appraisal & Arledge commitment well*

*Company has succeeded in lifting WI in oil production to over 250 BOPD . . . aiming at ~400 BOPD by December '19*

*Testing of shale formations points to higher value for Winchester leases*

*New prospects outlined on seismic mapping & near well tie-back data*

## Summary

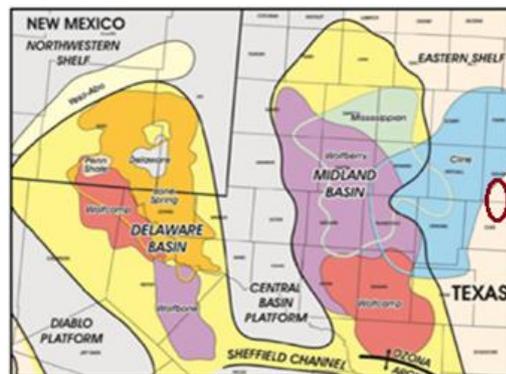
Winchester has established a petroleum exploration and production position over +17K net acres on the eastern flank of the Midland Basin in Texas. Winchester is Operator with a 75% working interest (WI) in wells at the White Hat lease and has 100% WI in permits over Bridgford and Thomas Ranch as well as McLeod, Lightning and Coke County permits.

Winchester recorded initial oil flow of over 300 BOPD from its WH 20#3 well at the Mustang prospect in which it holds a 75% WI. Additional wells are planned at Mustang and two other prospects where WI could be reduced from 75% to 50%, if acceptable farm-in funding terms are offered.

Permits sit on the eastern edge of the prolific Midland Basin, which is part of the larger Permian Basin complex. Sediments thin-out to about 2,200 metres in this location from over 3,700 metres in the most productive, central Midland Basin areas.

Just as on the western flank of Australia's Cooper Basin, oil migrates tens of kilometres from deeper zones to find traps in several horizons on the Basin's edge, under Winchester's leased areas. The company has moved its development focus to the Strawn Formation and more recently, back to Wolfcamp shale. Discovery of oil in the Fry sand of the Strawn Formation proves a new oil play type. Additionally, sediments at White Hat and surrounding permits hold potential for trapped petroleum within shale and other tight sedimentary units where horizontal drilling combined with hydraulic stimulation has been shown to deliver initial production of up to 1,500 BOPD in neighbouring permits.

Winchester's revenue is derived from a net revenue interest (NRI) in production of about 200 BOPD from the recent Mustang discovery plus wells drilled while the plays were de-risked. The company aims to build cash flow to support drilling of at least 3 wells per annum.



Map showing tectonic subdivision of the Permian Basin, after shaleexperts.com

## Permian Basin Activity

Typical vertical wells in this part of the Permian Basin commence production at ~100 BOPD with small volumes of gas and they typically produce ~60K-150K bbls of oil in total. Better wells can produce at an initial rate of over 300 BOPD, has been seen in the recent WH 20#3 well which produced oil at higher rates from the Fry sandstone, and deliver more than 200,000 bbls over a productive life. Winchester targets reservoirs that are likely to show natural fracture as well as some zones that would benefit from low cost, light fracture stimulation to enhance flow and recovery.

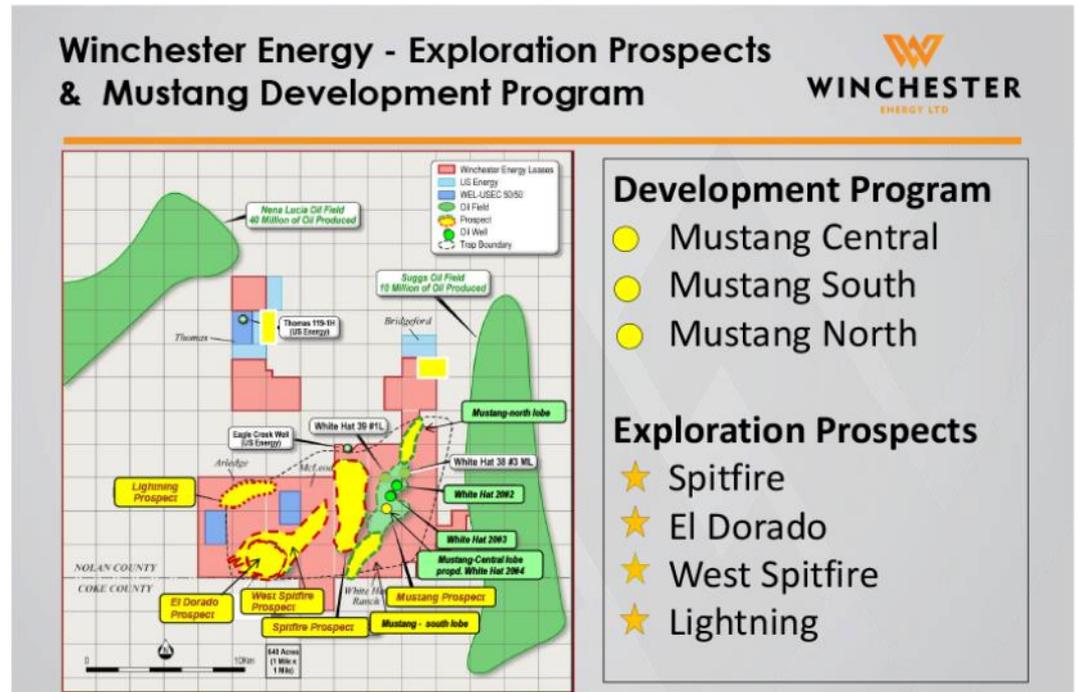
## SCHEDULE

At the Thomas Ranch 119H well where Winchester has a 12.5% Back-in Right, partner US Energy Corp of America (USEC) has conducted several tests of prospective formations. Most recently, the Three Fingers Shale unit was fraced and is now recovering water along with increasing volumes of oil after more than 50% of the fracc load recovered. Testing of this zone, which corresponds to the prolific Wolfcamp 'D' shale in the central Permian Basin with a vertical well, is significant since some operators in the area have begun drilling long horizontal wells through this shale to achieve initial flow rates of over 1,000 BOPD.

USEC also plans to fracc the Bridgford 40 well, where technical success would add valuable oil production to Winchester's account while also enhancing the overall value of its permits.

Winchester's area of opportunity for accessing oil in the Ellenburger Formation is now opening up shallower zones that have been found to hold oil, especially the Strawn Formation where the White Hat 20#2 well flowed with an initial rate (IP) of over 200 BOPD after stimulation and the follow-up WH 20#3 had an IP of over 300 BOPD. The company maps out 125 potential vertical well locations over 5,000 acres of prospective permits at 40 acre spacing.

## Permit map



## MUSTANG DISCOVERY

Winchester is now programming a follow-up WH 20#4 well for July '19 to be drilled 420 metres from the successful WH 20#3 well in the central lobe of the Mustang Prospect. If this well performs in line with WH 20#3, Winchester would boost its net oil production towards 380 BOPD, boosting estimated monthly operating cash flow towards A\$500,000. The company has identified 15 additional drill locations at Mustang that Strachan estimates to add potential total net present value of A\$28 million or 6.5 cps for the company's retained 75% interest.

The Mustang 20#3 well commenced production from the Fry sand at over 300 BOPD. Strachan estimates that the well has potential to produce over 150,000 barrels of oil from a total estimated central Mustang pool of 1.4 mmbbls of oil in the Fry unit of the Strawn Formation while the Ellenburger Formation at depth has additional potential, which was not productive at the WH 20#3 location. The WH 20#3 well taps into an estimated 1,000 acre closure at a depth of about 1,800 metres in the Fry stratigraphic trap. The well was a virtual twin of the 20#2 well that had an initial production of 20 BOPD prior to stimulation and an estimated recoverable ~99,000 bbls of oil.

The Mustang north and south prospects hold potential to boost total Prospective Resources towards 3.7 million barrels.

## EL DORADO PROSPECT

This prospect is estimated to have a 1000 acre, four-way dip closure at the Strawn level and will target Prospective Resources of 650K bbls in the Strawn sandstones with a total PoS estimated at 48% as well as 610K bbls in the deeper Ellenburger carbonates.

The company has relied on several adjacent wells to determine recovery factors plus 3D seismic data mapping to estimate the trapping area. While the two formations above are the main targets, other formations are in-closure and hold potential for additional discovery.

Winchester plans to farm-down from a 75% WI to retain a 50% WI interest in the prospect after payout while retaining a 33.3% paying interest.

## SPITFIRE PROSPECT

The Spitfire prospect is rated with a 28% PoS for a P50 Prospective Resource target totalling 4.5 mmbbls of oil, with 3,880K bbls in the Strawn and 610K bbls targeted in the Ellenburger. Success here would be somewhat of a game-changer for Winchester, opening up this new, incised valley fill play for more exploration and development.

The WHR 212#1 well targets a large stratigraphic trap with an aerial closure estimated at 2,000 acres. Again, Winchester will seek a farm-in partner and plans to retain a 50% WI.

*High flow rates achieved in neighbouring permits using fraced horizontal well completion*

### WOLFCAMP 'D' (PENN) SHALE

Wolfcamp shale units are a primary focus for oil production in the central Permian Basin, having produced many hundreds of millions of barrels of oil.

Recent horizontal drilling work on neighbouring permits along-trend from Winchester's, basin edge permits has achieved notable success in corresponding shale formations.

A programme of nine successful horizontal wells with 1,524 metre laterals, located 24 kilometres northwest, along trend from WEL's permits in the Hermleigh Strawn field produced initial production rates averaging 712 BOPD in the Strawn Formation. This location is considered as an analogue to the Spitfire channel play in the company's Strawn section.

### Strawn Formation

*Strawn Fm shapes as potential for further discovery*

The company has tested and is now producing oil from two wells in the Pennsylvanian Strawn Formation as well as the target Ellenburger. In the **White Hat 20#2** well, where the Ellenburger Formation was found to be water wet, the Strawn Formation was successfully completed and flowed oil at an initial rate of 200 BOPD, averaging 145 BOPD average flow rate over its first 30 days of production. White Hat 38#1 was also recompleted by fracing a zone through the Strawn Formation which showed initial production over just 3 days of 28 BOPD.

Winchester has a 25% WI in the **Oden A#2** well which produced oil from the Ellenburger Formation. Logging and sampling results from the Strawn formation while drilling this well provide encouragement to re-complete the well in the Strawn.

The Strawn shows several stacked intervals that are prospective for oil which, along with three unconventional shale units and tight carbonate Formations in the Wolfcamp "D" zone, could ultimately form the basis for a new play type as outlined above.

*Ellenburger is a prime target, but other zones appear to hold commercial potential*

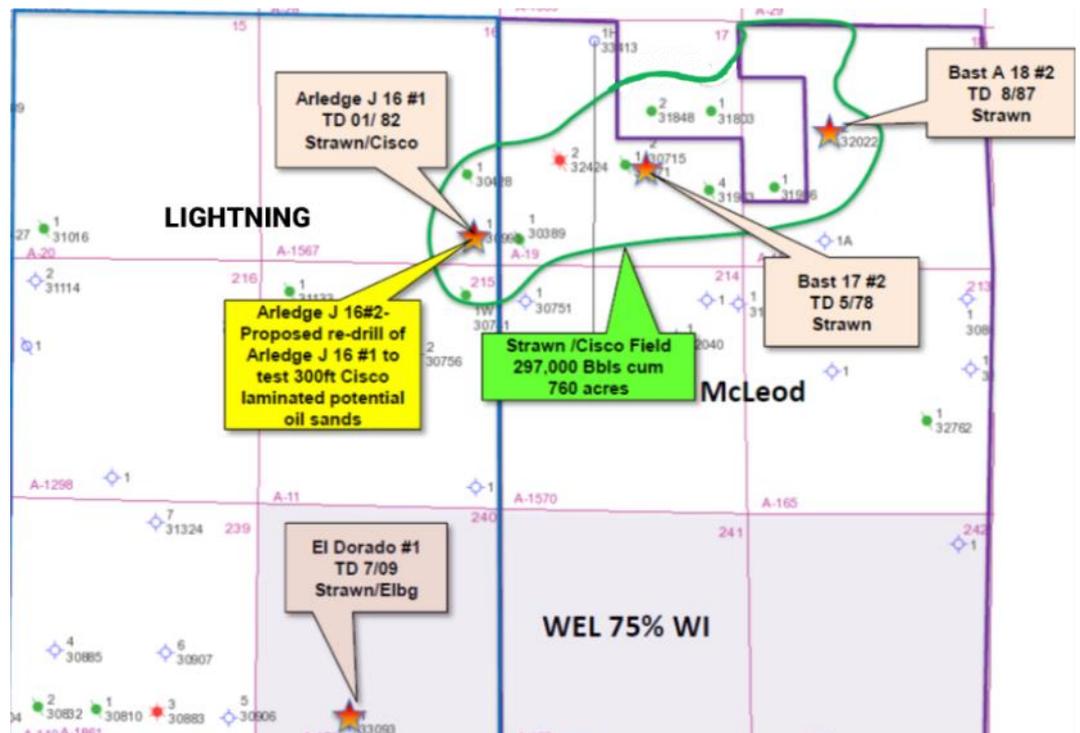
Electric logs, sidewall cores and FMI formation image data have been recorded to better define plays that may become commercial once the oil price rises above US\$65/barrel to justify drilling horizontally.

### Lightning Prospect

The Arledge 16 #2 well is a re-drill of Arledge 16#1, drilled in 1982 on the Lightning Prospect. The target is a Cisco Sand stratigraphic section with 91 metres of untested laminated oil pay in two 45.5 metre zones on logs. Down dip the section produced 46,000 bbls of oil. Up dip the Cisco has produced 100,000 barrels in the Bast field area from 4 wells. The shallower secondary objectives are productive or have calculated pay in nearby wells.

### Lightning Prospect

*Simulation tests target 1.9 mmBO plus 7.5 Bcf of gas*



Source: Winchester

The CCSS-3 Cisco sand package tested oil and produced 45,165 barrels of oil from down-dip well 215 #1, targeting the upper part of the same laminated sand package while an up-dip well tested gas and oil. Winchester plans to drill a 100% WI, shallow, \$350,000 commitment well on the Arledge Lease in mid-July, to be named the Arledge J16#2.

### Simulation tests awaited!

The Arledge 16#2 well will be a redrill of Arledge 16#1, targeting a Cisco Sand stratigraphic section with 91 metres of untested laminated oil pay, seen on logs as seen in Arledge 16#1.

The company estimates potential gross Prospective Resource of 0.9 mmbbls at the P50 level and up to 5 million bbls for the Cisco sands at the P10 level.

## Valuation

### Target value of 5.4 cps

Strachan Corporate takes a conservative view on the value of Winchester's current net oil production of ~210 BOPD. Additionally, risked upside is calculated for the upcoming programme, plus the broader Strawn plays and longer term potential valuation up-lift from development of unconventional plays.

Together, Strachan Corporate values total success at each of these plays at A\$115 million or ~A\$0.20 per share for WEL on a fully diluted basis.

Winchester's permit areas are not directly comparable with the highly rated Midland Basin or the Cline play areas further to the west. Permits in the most highly rated permits transact for over US\$40,000 per acre and productive leases are valued at between US\$52K and US\$125K per flowing barrel of oil equivalent.

A mid-case, 'type well' with IP of 150 BOPD, costing US\$0.8 million to drill and complete is assessed with a pre-tax NPV<sub>7</sub> of US\$14.7/bbl.

Wells that deliver typical Nolan County IP's of between 50 and 300 BOPD and corresponding EURs of 41K to 160K BOE, are assessed at WTI oil prices from US\$50 to US\$65/bbl to deliver a matrix of insitu values per barrel of oil.

For valuation purposes, an oil price of US\$55 and an IP of 150 BOPD is chosen.

Initial target projects are set out in a risked valuation matrix using the ISV selected above and deducting costs for discovery to Winchester.

### Valuation matrix – US\$/bbl v IP & price

Eastern Permian ISV per barrel				
IP	BOPD	50	100	300
EUR	KBOE	41	78	160
Pre tax NPV *				
WTI	US\$/bbl	US\$/bbl		
\$	50	-\$7.1	\$ 7.2	\$15.6
\$	55	-\$4.6	\$ 9.7	\$18.1
\$	60	-\$2.1	\$12.2	\$20.7
\$	65	\$0.5	\$14.8	\$23.3

\* Applying 5% discount to WTI  
Source: Strachan Corporate

### Risked exploration matrix

Prospect	WI		Target		Success		POS %	Cost \$m	Risked Value US\$m.		
	%	% rtn	Gas Bcf	Oil mmbbl	ISV USD Gas Oil	Value US\$m A\$/shr					
Mustang Fry	75%	64%	1	1.6	\$0.9	\$12.0	\$ 13	\$0.032	75%	2.0	7.3
Mustang Nth & Sth	75%	50%	1	0.4	\$0.9	\$12.0	\$ 3	\$0.008	30%	1.6	-0.7
Spitfire Strawn Ch	75%	50%	1	3.9	\$0.9	\$12.0	\$ 23	\$0.060	25%	0.4	5.4
Spitfire Ellenburger	75%	50%	1	0.6	\$0.9	\$12.0	\$ 4	\$0.010	28%	0.0	1.1
Eldorado Strawn	100%	50%	1	0.7	\$0.9	\$12.0	\$ 4	\$0.011	40%	0.0	1.6
Eldorado Ellenburger	100%	50%	1	0.6	\$0.9	\$12.0	\$ 4	\$0.010	35%	0.4	1.0
Lightning	100%	100%	0	0.9	\$0.9	\$12.0	\$ 11	\$0.028	45%	3.1	1.8
Source: Strachan Corporate ISV = Insitu value, US\$ per Mcf or bbl							\$ 62	\$0.158			17.6

Further dilution of equity is assumed to be required to support ongoing exploration and development which will also be supported by planned farm-out funds.

### Valuation matrix

### Upside value to >20 cps

Valuation	Success value			Risked value	
	A\$m.	\$/shr	Risk	A\$m.	\$/shr
Cash	\$ 1.6	\$0.003	100%	\$ 1.6	\$0.003
Production	\$ 3.0	\$0.005	70%	\$ 2.1	\$0.004
Options	\$ 2.8	\$0.005	100%	\$ 2.8	\$0.005
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	\$115	\$0.204		\$ 30	\$0.054

Source: Strachan Corporate

The Spitfire project holds the most upside for success on a standalone basis but is also the most risky of the three prospects outlined. Strachan Corporate estimates that Spitfire's 4.5 mmbbls would be worth about A\$31 million to Winchester on success, which compares favourably with the company's current market capitalisation of \$13 million.

Strachan Corporate believes that further modest success on Winchester's Nolan County permits holds potential to lift the value of its key permit areas to over US\$2,000/acre, which translates to a value of 8 cps to Winchester.

## Leadership

### Chairman

#### John Kopcheff

John is a geologist and geophysicist, with over 45 years of experience in Australia, South East Asia, USA, South America and the North Sea, in oil field operations and management.

Mr Kopcheff founded Victoria Petroleum Ltd (now Senex Energy Ltd) and held the position of Managing Director for 26 years from August 1984 until late July 2010 pioneering oil exploration and production success on the western margin of the South Australian Cooper Basin. During that time Victoria Petroleum Ltd increased its market cap from \$10M at float to \$116M at his retirement.

Mr Kopcheff joined Winchester Energy as Non-Executive Chairman in September 2017.

### Non- Executive Director

#### Larry Liu

Larry is a professional investor who is an associate of Mr Yang Xiangyang, a 25.6% owner of Winchester. He has a corporate history as a senior executive of General Electric.

### Non- Executive Director

#### Peter Allchurch

Peter is a Geologist and resources venture capitalist with over 50 years of experience in minerals and petroleum exploration, development and production who has founded several successful ASX listed companies. He and Mr Henry were instrumental in developing the Eagle Ford Shale portfolio for Aurora Oil & Gas, Eureka Energy and Adelphi Petroleum.

### Managing Director

#### Neville Henry

Neville is a Houston based Geologist with over 40 years of experience in successfully finding oil & gas in six sedimentary basins globally. He was formerly International Exploration and Worldwide Business Development Manager for Anadarko at a time when its oil production rose from 25,000 to 400,000 BOPD.

### Disclaimer

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