### tangiers petroleum limited

### Project Icewine December 2014

ABN 80 072 964 179

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# **Project Icewine Highlights**

Operator on ~100,000 contiguous acres onshore Alaska in prolific oil-rich province with multiple objectives

87.5% Working Interest, 10 year leasehold, 16.5% royalty and strategically located in the heart of the play and close to infrastructure

Untested unconventional primary objective in shale complex that sourced the 13 BN barrel Prudhoe Bay Oil Field - opportunity identified by first mover in the Eagle Ford

Shallow secondary conventional objective is the hottest play on the North Slope with Tangiers acreage offset by two discoveries

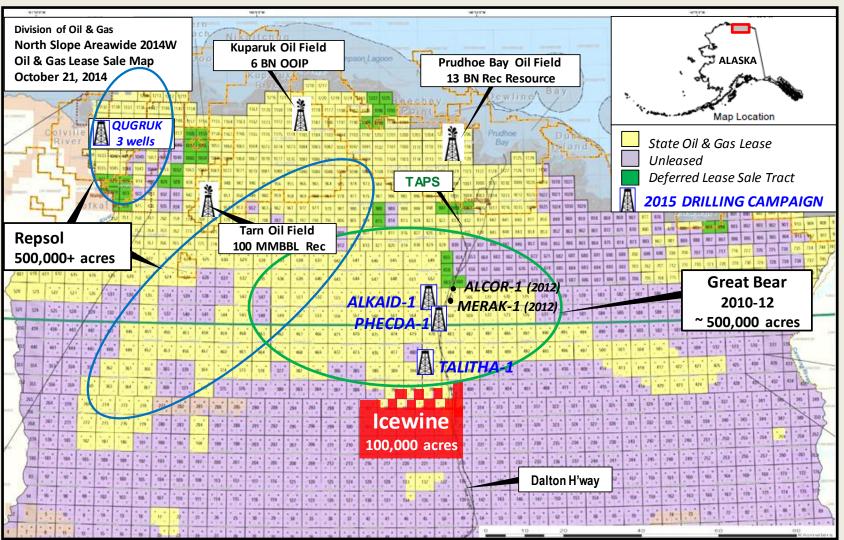
Excellent fiscal terms with cash rebates up to 85% of exploration expenditure in CY2015

- Year round operational access with both the Dalton Highway and TAPS pipeline running through Icewine acreage
- Aim to de-risk and mature Icewine by drilling pilot hole (rebate leveraged), attract farminee & retain exposure to upside or future sale
- Near term North Slope Activity directly relevant to Icewine:
  - Great Bear 3 well drilling campaign in acreage immediately North of Icewine to commence Jan 2015

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### Project Icewine Location: North Slope





# Nearby Drilling 1H 2015

#### GREAT BEAR

Three exploration wells planned from Jan-15 to May-15 to appraise both conventional and unconventional targets

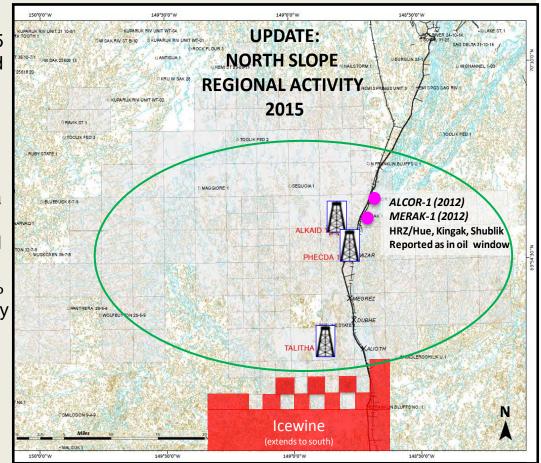
- Alkaid-1
- Talitha-1, 4 miles from Icewine border
- Phecda-1

Alcor-1 & Merak-1 drilled in 2012 with media reports stating:

- HRZ/ Hue, Kingak and Shublik shales all within the oil window
- High TOC reported in HRZ/Hue up to 8%
- Small Brookian conventional oil discovery in the Nanushuk sands

#### **REPSOL/ARMSTRONG**

Three exploration wells planned in the Qugruk area targeting the Brookian conventional play



# **North Slope: Salient Facts**

	Proven and productive petroleum province which hosts the largest oil complex in North America			
	First Mover Advantage	Co-venturer spearheaded Conoco Phillips' early entry into the Eagle Ford Shale Play sweetspot. Icewine acreage interpreted as similarly located in a high liquids, vapour phase sweetspot		
	Liquids Rich Play	2+ Billion Barrels of Recoverable Oil in the HRZ/Hue shale, one of the sources the largest field in North America, and has never been tested (USGS 2012)		
	Attractive Fiscal Terms	Excellent fiscal regime, politically stable 10 year primary leases with no mandatory relinquishment 12.5% State Royalty		
	Mature Infrastructure	Operational year round access Dalton Road and Trans Alaska Pipeline runs through acreage with 1.5 MM BOD spare capacity		
	Generous Tax Incentives	<ul> <li>Alaskan State Tax incentives on exploration drilling:</li> <li>85% cash refund (2015), 75% (mid 2016) thereafter 35%</li> <li>Seismic: 40%</li> <li>Mezzanine funding facility linked to tax incentives</li> </ul>		
N	Material Position	Large, contiguous 100,000 acre position exceeds hurdle rate for attraction of majors		

### Primary Target – Shale Oil Highlights

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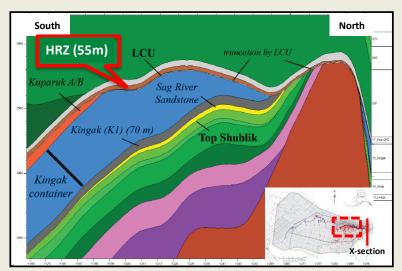
Primary shale oil target is the HRZ member of the Hue Formation

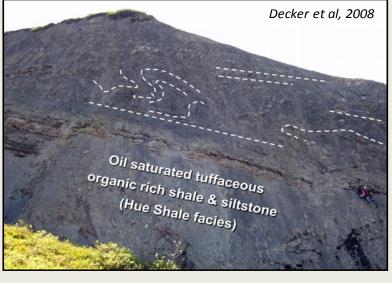
Favourable HRZ characteristics:

- Thick condensed marine shale
- Average thickness 195 feet (55m)
- Predominantly Type II, oil prone and sweet
- Laterally extensive and structurally simple
- Exceptional porosity indicated from log analysis

Great Bear drilled two wells in 2012 immediately North of Project Icewine indicating:

- Good oil shows over 180m in the HRZ/Hue Fm
- TOC levels up to 8% in the HRZ shale
- HRZ within the oil window (implied early mature)
- Highly brittle lithology providing encouragement for 'frackability'
- 'Prediction of hydrocarbon phase' based on coventurer's Eagle Ford experience
- HRZ member of the Hue Formation shale in Icewine acreage is predicted to intersect the liquids rich vapour phase





### Primary Target – Shale Oil Thermal Maturity

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OF-DEFS

Given the good quality and quantity of organic matter (TOC) in the HRZ then one of the main controlling factors is thermal maturity / burial history

Concept applied to Icewine is based on experience gained by our co-venturer as an early mover in predicting the Eagle Ford sweetspots whilst working for ConocoPhillips

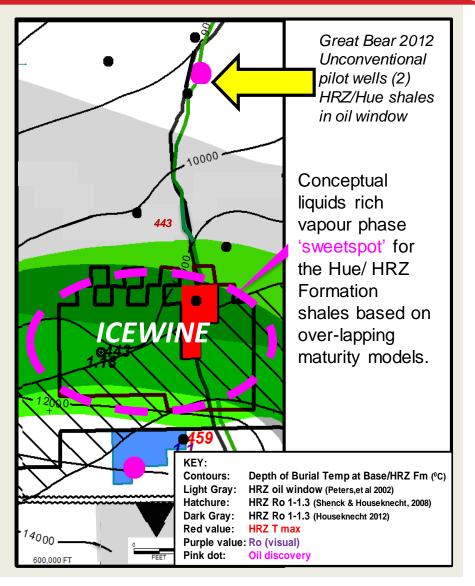
 ConocoPhillips leased >500,000 of the best acres in the Eagle Ford

Traditionally the optimal thermal maturity window for oil is defined by  $R^0$  values of 0.6 - 1.0

 Practical experience shows unconventional plays now target R<sup>0</sup> values of 1.0 – 1.3, characteristic of the 'volatile oil to wet gas' window

Superposition of independent thermal maturity models predicts intersection of the liquids rich vapour phase in the Hue/HRZ shales across the Icewine acreage

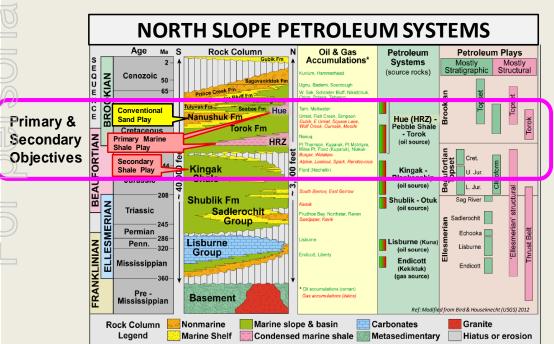
Potential for overpressure to assist deliverability of liquids

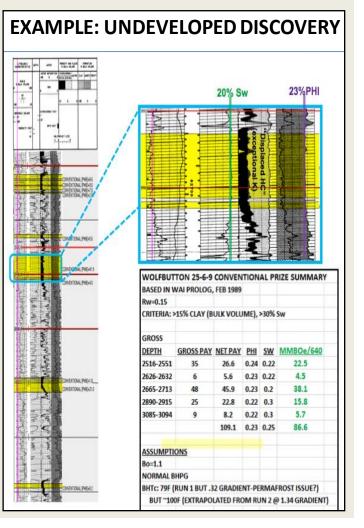


### Secondary Objective Conventional

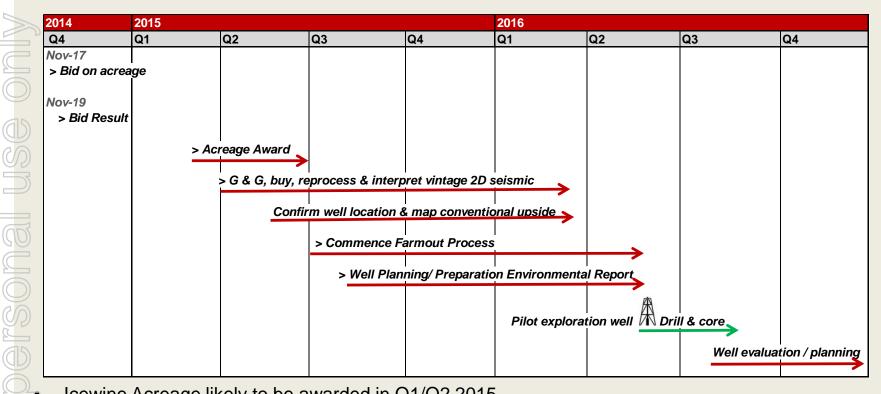


- - Proven and most active play on the North Slope
  - Two discoveries on acreage immediately adjacent to Icewine including Great Bear 2012
  - Targeting shallow Nanushuk sands, a high-porosity reservoir that is regionally "filled-to-spill" and seismically identifiable
  - Same depositional system as the HRZ/ Hue Formation





### **Project Icewine Indicative Work Program**



- Icewine Acreage likely to be awarded in Q1/Q2 2015
- Purchase and reprocess vintage 2D seismic
- Geological and geophysical studies including seismic interpretation, confirm well location & map conventional upside
- Well planning capitalise on generous State of Alaska rebates
- Farm-down campaign to be run in tandem with maturation of Icewine opportunity
- Drill and core vertical pilot well H1 2016 to 'assay' source quality and characteristics

# **Recent Industry Transactions**

	Buyer	Seller	Trade		
Onal use (	Repsol	Armstrong	Cost recoupment on ~ 494,000 acres, ORRI, carried 30% WI through minimum of \$US 750MM of drilling		
	Halliburton	Great Bear	Farmed in by drilling 2 wells and acquiring 600km <sup>2</sup> of 3D Seismic		
	Hilcorp	BP	Acquisition of ~20,000 BOPD for an estimated \$US 2.6BN		
	Lender	Borrower	Trade		
	Melody Business Finance LLC	Rampart Energy (42,350 acres)	Rampart, a \$US 15MM market cap ASX listed company, secured a \$US 50MM credit facility to provide funding for drilling and seismic. Facility secured by Alaska Tax Credits		

#### **Project Icewine: Alaska Deal Metrics**

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- Ground floor entry with minimal promote on acreage swap with Burgundy Xploration LLC (BEX)
  - 8,640 existing acres (BEX) reciprocally backed into the awarded acreage based on valuation of US\$0.5 MM to US\$1.0 MM (second US\$0.5MM milestoned on spud of well)
- Initial acreage position post award 99,360 acres (400 km<sup>2</sup>); 86,940 acres net to Tangiers
- Ground floor acreage acquisition costs average US\$30 per acre
- Tangiers' wholly owned subsidiary Accumulate Energy Alaska Inc. will be the Operator of record
- Vendors receive 4% ORRI plus Net Profit Interest (NPI) based on Multiple on Invested Capital (MOIC)
- At 1 x MOIC the NPI is 5%, increasing by 5% with each MOIC increment up to a maximum of 45% at 10 x MOIC
- Burgundy carried on pre-drill costs, currently estimated at US\$2.1m
- Vendors become "boots on the ground" in the USA with Board seats on the US subsidiary and a consulting agreement

#### Icewine Unconventional Opportunity: De-risking by pilot hole drill & core



- Risk of not encountering hydrocarbons in targeted HRZ/Hue shale is considered low
- Pilot hole with coring program will confirm well known positive characteristics:
  - Extent and thickness of shale formation (in combination with seismic mapping)
  - Organic quantity and quality (TOC) of the shale
  - Reservoir characteristics porosity / permeability
  - Thermal maturity of source rock and phase liquids versus gas
- In addition de-risk the following significant parameters:
  - Mechanical properties of the shale
  - Integrity of base seal
  - Post well technical analysis will mature the Icewine Oil shale play and will provide technical insight as to potential productivity, deliverability and commerciality
- Funding for well expected to come substantially from mezzanine finance backed by Alaskan State tax rebate

#### **Project Icewine Concluding Remarks**



- Low cost entry to gain exposure to large untested unconventional shale oil play on the North Slope with significant reward
- Excellent fiscal terms and tax incentives:
  - Low cost exploration and drilling with up to 85% of costs reimbursed
  - Manageable funding via mezzanine funding facility linked to tax incentives
- Control of work program and funding requirements through operatorship
- Material working interest at 87.5%, opportunity to add value, farm down and retain exposure to upside or future sale
- Additional Brookian conventional prospectivity hottest play on North Slope
- Advantage of good infrastructure and year round access
- De-risking and maturation of Project Icewine by drilling pilot hole (rebate leveraged)
   greater appeal to potential farminees

### **New Board and Management**

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#### Mr Michael Evans – Non-Executive Chairman

Extensive executive and Board level experience with publicly listed companies in the natural resources sector spanning 30 years.

Founding Executive Chairman of ASX oil and gas explorer FAR Limited. Mr Evans is currently the Non-executive Chairman of ASX-listed TNG Limited.

B Bus Curtin University, Chartered Accountant, Chartered Secretary, Governance Institute Australia.

#### Dr Stephen Staley – Non-Executive Director

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30 years of energy management and technical experience including with Conoco and BP. Dr Staley was founding Managing Director of upstream AIM start-ups Fastnet Oil & Gas plc and Independent Resources plc and a Non-executive Director of Cove Energy plc. BSc (Hons.) in Geophysics from Edinburgh University, PhD in Petroleum Geology from

Sheffield University and MBA from Warwick University.

#### Mr Brent Villemarette – Executive Director

Over 30 years experience in the global oil and gas industry, primarily with Apache Corporation in the US and in Australia.

Also served as Chief Operating Officer for Transerv Energy, an ASX listed oil and gas company.

Reservoir Engineer.

#### Mr David Wall – Managing Director

4 years experiences in strategy and planning at Woodside Petroleum.

6 years experience in financial services industry as small cap oil and gas equities analyst, specialising in African exploration companies.

B.Comm in Management and Finance from University of Western Australia.

### **Corporate Information**



KEY STATISTICS AS AT 27 NOVEMBER 2014
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Total Ordinary Shares:	452,026,723
Options:	39,025,087
Number of Shareholders:	2,793
Top 20 Shareholders (27.11.14):	49.42%
Price :	A\$0.01
Market Capitalisation:	A\$MM 4.52

#### **Brokers:**

#### Australia

Hartleys Ltd As Corporate Advisor : Mr Dale Bryan + 61 8 9268 2829

#### United Kingdom

RFC Ambrian Limited As Nominated Adviser: Mr Oliver Morse/Ms Trinity McIntyre +61 8 9480 2500

As Corporate Broker: Mr Charlie Cryer + 44 20 3440 6800

#### Registered Office: Level 2, 5 Ord Street, Perth WA 6005

#### **Postal Address:**

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Telephone: +61 8 9485 0990 Facsimile: +61 8 9117 2012

Web: www.tangierspetroleum.com

Share Registry ASX: Computershare Investor Services Pty Ltd

ASX: TPT

AIM: Computershare Investor Services PLC

AIM: TPET

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