APPENDIX

PROJECT ICEWINE: CONVENTIONAL LEADS PROSPECTIVITY MAP AND ACREAGE POSITION



KEY LEADS

Alpha					Project Icewine Prospectivity Map
Sequenc	e Brookia	an			
Trap	Stratigr	aphic pinch	nout to we	st and north	
Play	Lobate Workin	toe of slop g petroleun	e/ basal flo n system	oor fan	
Remarks	Large a	areal extent d in close p	t with signi proximity to	ficant relief road and TAPS	GQLF INDIA ALPHA
Prospective Oil Resources (mmbbl) Unrisked Recoverable					BRAVO
P90	P50	P10	Mean	Net Mean to 88E	
19	71	263	118	91	

Alaskan Seismic Ventures, Franklin Bluffs 3D Confidential Licensed Data, 2015



⁸⁸ Energy Icewine 2D Seismic Data, (2016)

Cautionary Statement: The estimated quantities of petroleum that may be potentially recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration, appraisal and evaluation are required to determine the existence of a significant quantity of potentially movable hydrocarbons.

NORTH SLOPE ANALOGUE: TARN OIL POOL

The Project Icewine conventional prospecivity is considered to be an extension of and analogous to the Tarn/ Meltwater Stratigraphic Play Fairway to the north. The Tarn depositional systems, are diagrammatically illustrated in figures below, comprising slope apron, turbidites, basin floor fan and channel levee deposits fed by incised gullies on the shelf break to the west. The Tarn Oil Pool - part of the Kuparuk River Unit - has produced in excess of 100+ MMBO.

The Tarn Oil Pool comprises multiple stacked sands within the Seabee Formation. Geologically equivalent incised gullies to those in the Tarn Play Fairway have been identified on the shelf break associated with the western margin and similar seismic geometries habe been mapped across Project Icewine.



Tarn Depositional Sytem (Annotated, after Helmoldt 2006)

Incised gullies / feeder channel associated Project Icewine Western Play Fairway



Recent High Impact Regional Discoveries

Two regional discoveries greater than one billion barrels of oil in the Brookian sequence have been announced in the last 18 months, both sourced / co-sourced by the HRZ shale. Although not directly analogous to Project Icewine these discoveries indicate the significant remaining undiscovered conventional oil resource potential within the Brookian.



Recent Regional Billion Barrel+ Discoveries in Brookian Sequence

*1. Analogous to Conventional Prospectivity at Project Icewine

Public reported metrics on each are summarised below:

Joint Venture	Armstrong/Repsol
Discovery Name	Nanushuk
Reservoir Horizon	Brookian
Areal Extent	~25,000 acres
Gross / Net Pay	650 ft / 150 ft
Resource Size (oil)	1.4b (2C independent)
Oil Gravity	30 API
Likely Source	Shublik / HRZ Shale

Joint Venture	Caelus Energy
Discovery Name	Smith Bay
Reservoir Horizon	Brookian
Areal Extent	~75,000 acres
Gross / Net Pay	1,000 ft / 250 ft
Resource Size (oil)	2.5b (Caelus est)
Oil Gravity	40-45 API
Likely Source	HRZ Shale