Understanding the Alaska System

Fiscal Systems Seminar

August 29, 2023
AM session

https://youtu.be/o2jMAl5z6KA

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COURSE AGENDA

Day 1 AM

INDUSTRY BACKGROUND

Nomenclature
Hydrocarbons
Global Market

Day 1 PM

INTRO TO FISCAL SYSTEMS

Fiscal Systems:
Principles
Components

Day 2 AM

FISCAL SYSTEMS DEEP DIVE

Project Economics
Fiscal Systems:
Design
Intro to Alaska Tax

Day 2 PM

ALASKA DEEP DIVE

Alaska Fiscal System
Order of Operations

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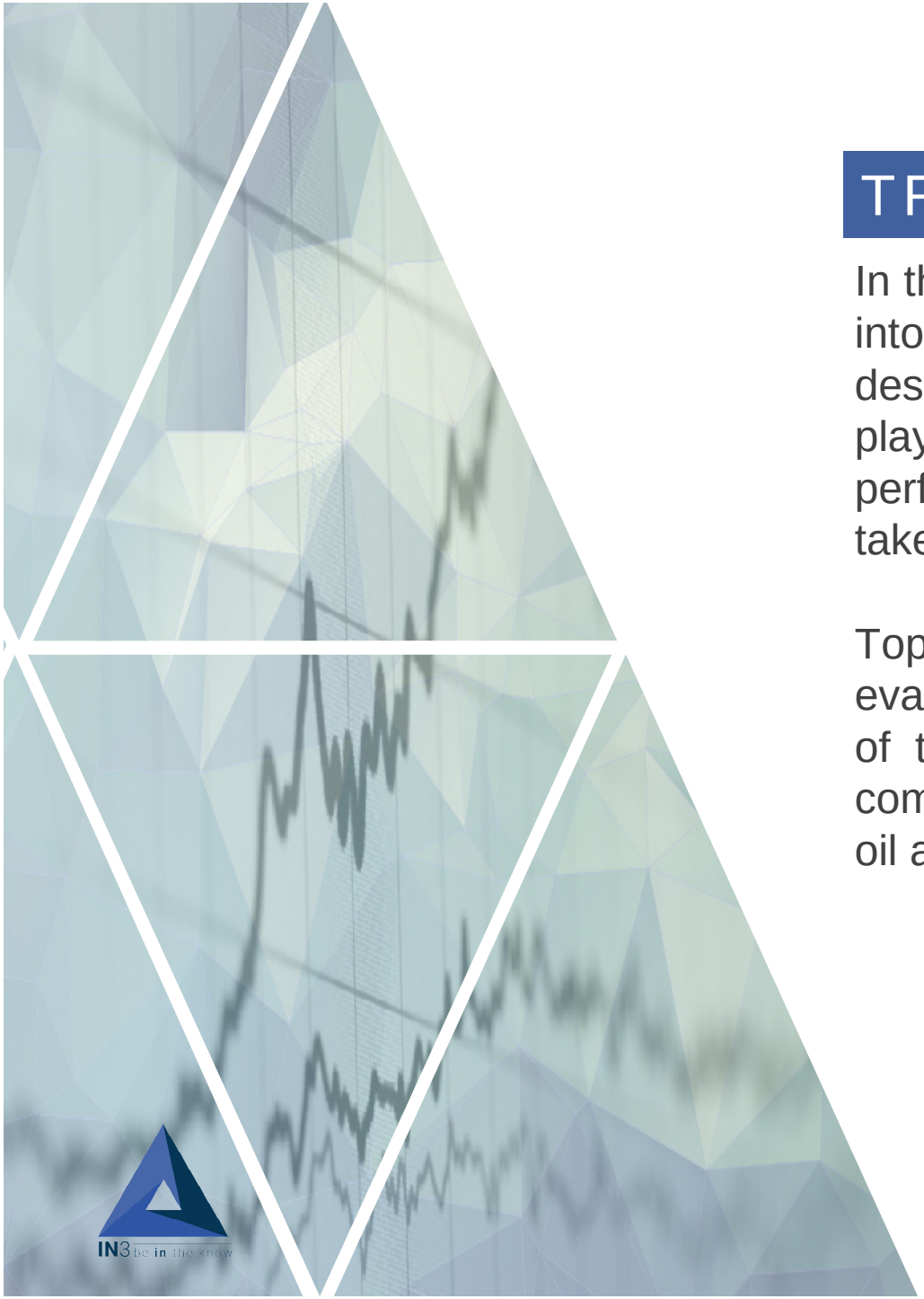
Day 2 AM session



TRAINING SUMMARY

In this session we will take a deeper look into project economics and advanced design elements of fiscal systems, each playing a significant role in financial performance. Additionally, we will start to take a look at Alaska's fiscal system.

Topics include understanding producer evaluation of projects, important element of timing, deep dive into fiscal system components, and a timeline of Alaska's oil and gas tax history.

PETROLEUM FISCAL SYSTEMS

DAY 1 RECAP

- Nomenclature
- Hydrocarbon background
- Global Market
- Why all oil and gas are not equal
- Global competition for producer capital
- The theory behind the sharing of petroleum profits
- Competing for oil company capital
- Types of fiscal regimes
- Components of the fiscal toolbox

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EXPECTATIONS FOR THE DAY

DAY 2

- This is a training and information sharing session primarily for the benefit of state legislators and their staff
- Our intent is to provide background and context on petroleum fiscal policy design and Alaska's current fiscal system for oil and gas
- We want you to be prepared and able to make informed decisions and understand the impact of ideological approaches
- Please do not hesitate to ask questions anytime during the presentation

WHAT DO YOU HOPE TO LEARN?

DAY 2

- Petroleum fiscal systems involve many different concepts. We will be sharing of few of the key concepts and how they relate to Alaska's oil and gas industry

- In order to make this session most productive for you, what questions do you hope to have answered?

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INTRODUCTION

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ALASKA HAS GREAT POTENTIAL

OIL AND GAS INDUSTRY IN ALASKA

- In 2022, Alaska only represented 0.5% of global oil production
- Alaska faces the same headwinds as the industry today, but more so given the environment sensitivity:
  - Global push away from hydrocarbons towards renewables
  - Investors pledging to not invest in arctic development
  - Environmentalists trying to stop future leasing and operations
- But Alaska's potential is high:
  - Proven large oil fields
  - Vast hydrocarbon resources, including gas for LNG
  - Highly experienced operators with current activity, some who have been in the state for decades, others with a fresh perspective
  - Demand for hydrocarbons will remain strong for decades more
- The state has the power to help mitigate external forces it can't control, and through its fiscal system create a business operating environment that will benefit both the state and producers

PROJECT ECONOMICS

ADVANCED CONCEPTS

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INSIGHT. INQUIRY. INGENUITY.

UNDERSTANDING COMPANY DRIVERS

COMPARE TO GOVERNMENT DRIVERS

- The stewardship role of governments is to retain as much value from the production of its hydrocarbons while continuing to attract new investment dollars
- In evaluating what its level of take should be, governments usually look at how a project compares in its regime versus other competing regimes
- Sometimes, but not often enough, governments look at their fiscal system through the eyes of the producer
- While governments tend to be more transparent about their drivers, companies are a bit more opaque when it comes to discussing how they make investment decisions

HOW OIL COMPANIES EVALUATE PROJECTS

INVESTMENT DECISION PROCESS

- Generic company process
  - Align with corporate strategy
  - Preliminary risk assessment
  - Identification of specific opportunities
  - Economic analysis, detailed risk assessment
  - Corporate portfolio management
  - Strategic decision

- Risk assessment can cover:
  - Cost, schedule, safety, legal, geology, product price, political, royalty, tax, supplier, equipment/material, technology, weather, environmental, personnel, infrastructure, markets

- Company economic models are designed and run according to company specific procedures

- They have specific comparative metrics such as max cash out, time to payback, IRR, NPV, ROI, etc.

UNDERSTANDING COMPANY DRIVERS

KEY SKILL OF PRODUCERS IS LARGE PROJECT MANAGEMENT

- Many companies deploy a stage gate process similar to:
  - Appraise – desktop study of do I want to be in XYZ country/state
  - Select – Of all the possible opportunities, choose 1
  - Design – Prepare design options, costs and expected revenues
  - Build – Receive FID and begin building
  - Operate – Commence production

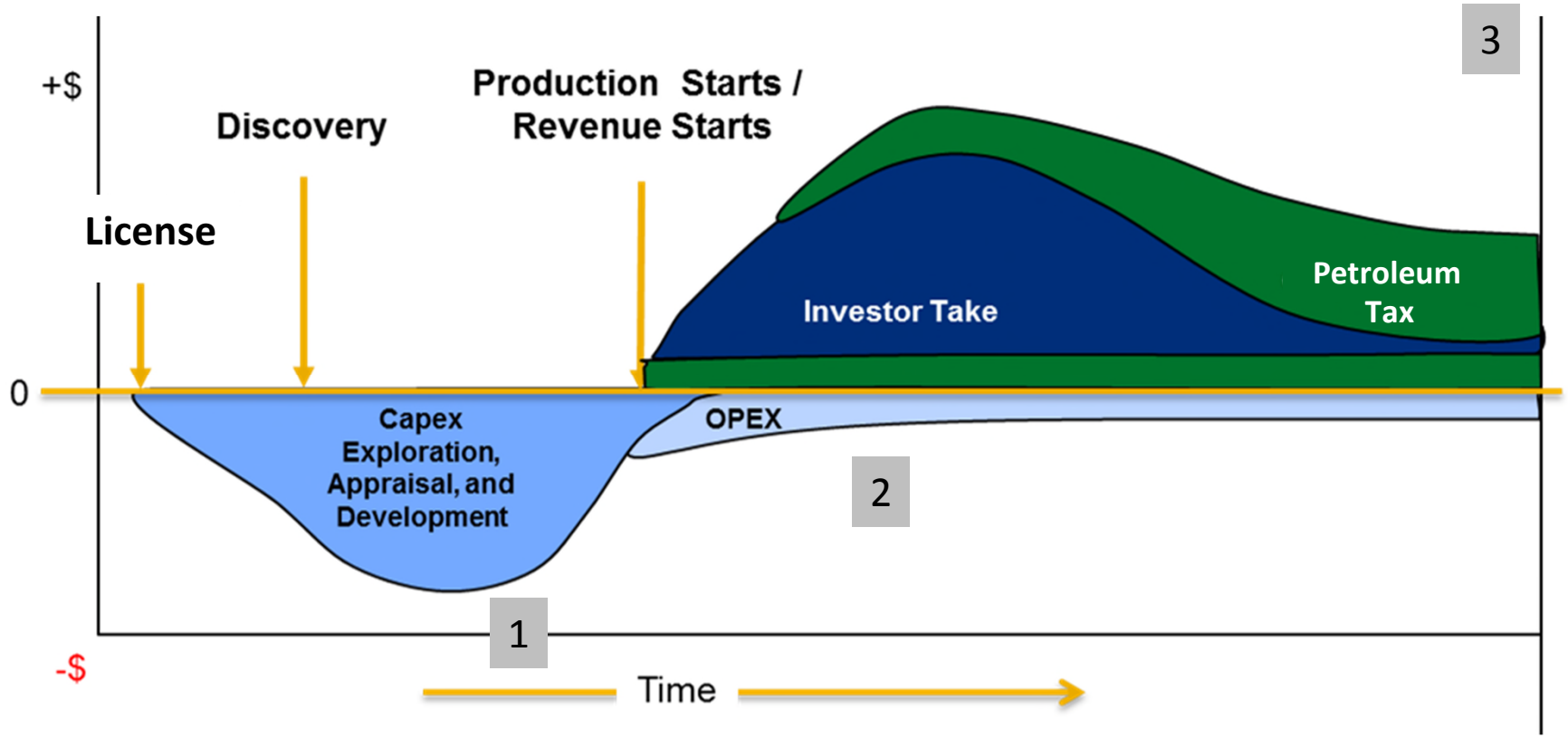
- In order to proceed to the next stage, a potential project will need to meet the milestones set for the previous stage and receive budget approval to move forward into the next

- The goal is at each stage gate review is to reduce uncertainty, manage risks and identify opportunities for added value

- Risk mitigation sometimes carries as much importance as economic evaluation

GENERIC LARGE PROJECT “HOCKEY STICK”

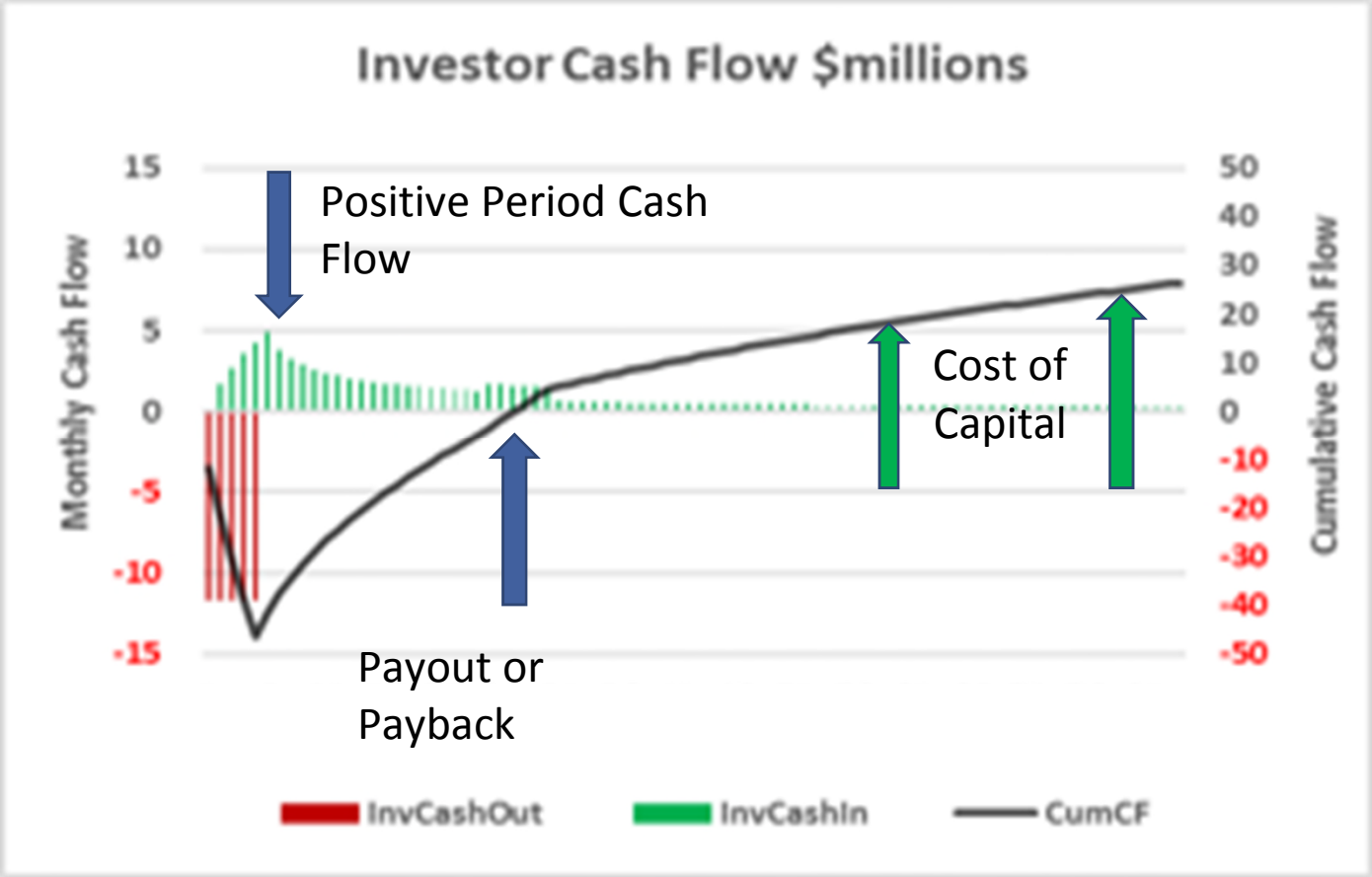
CUMULATIVE CASH FLOW- HOW MUCH IS PROFIT?



1. How Deep? Maximum cash out
2. How Wide? Time to pay out or recovery of costs
3. How High? Enough profit to be worth the risk

THE “HOCKEY STICK”

POSITIVE CASH FLOW DOES NOT EQUAL PROFIT



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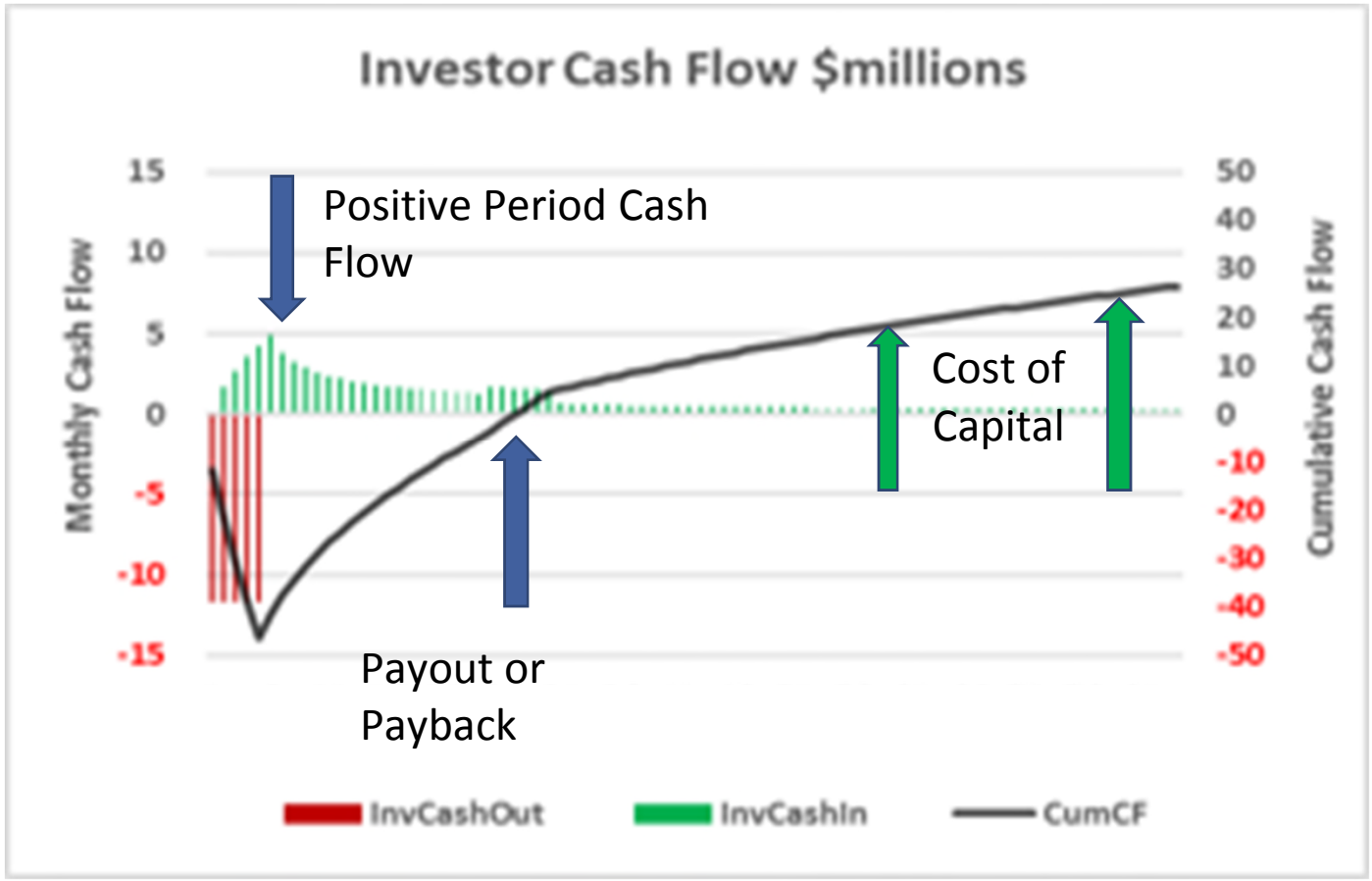
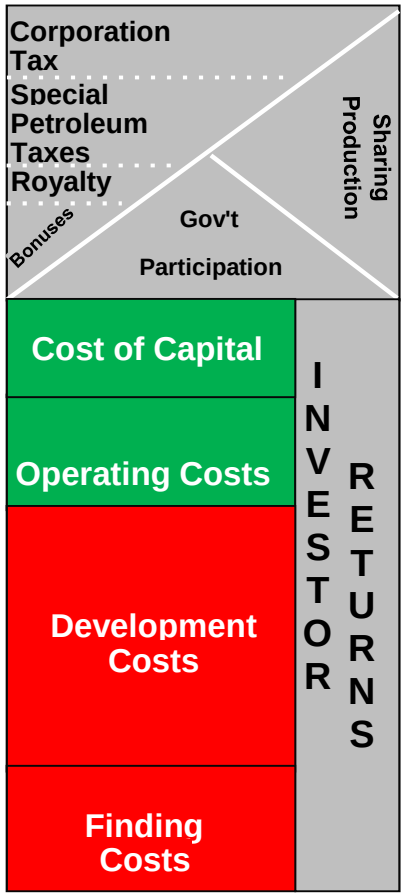
COSTS MUST BE RECOVERED PRIOR TO PROFIT

POSITIVE CASH FLOW DOES NOT EQUAL PROFIT





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ECONOMIC EVALUATION PARAMETERS

POOR FINANCIAL RETURNS DO NOT RECEIVE INVESTMENT

- Earlier we talked about the relatively large amount of capital that is spent in countries that have a ‘higher government take’ than Alaska

- We suggested that time plays a very important role in project economics as company metrics favor higher early cash flows

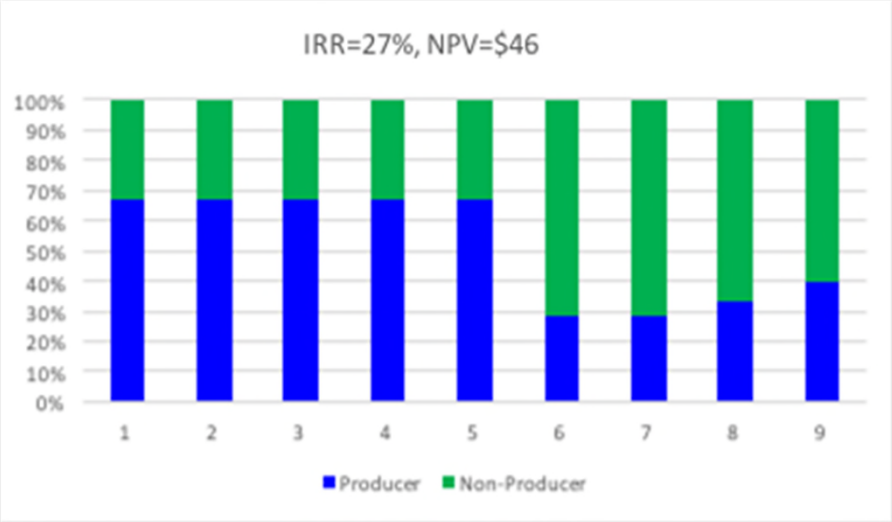
- Look at a very simplistic model with $1000 in cost and a total of $2000 back to the producer.
  - Varying the timing of the expenditures
  - Varying the timing of the cash back to the producer

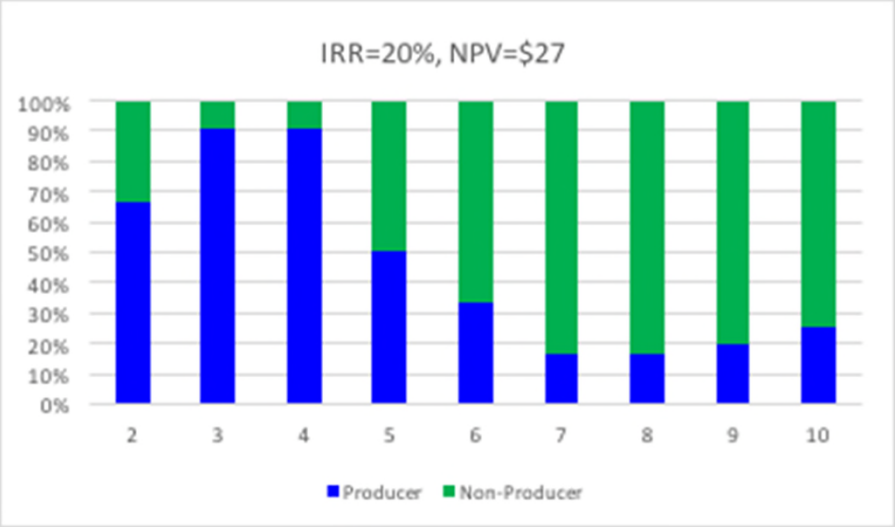
- Simplified explanation of terms:
  - IRR – interest earned on their investment
  - NPV – Value added above corporate cost of capital
  - ROI – ratio of cash in divided by cash out

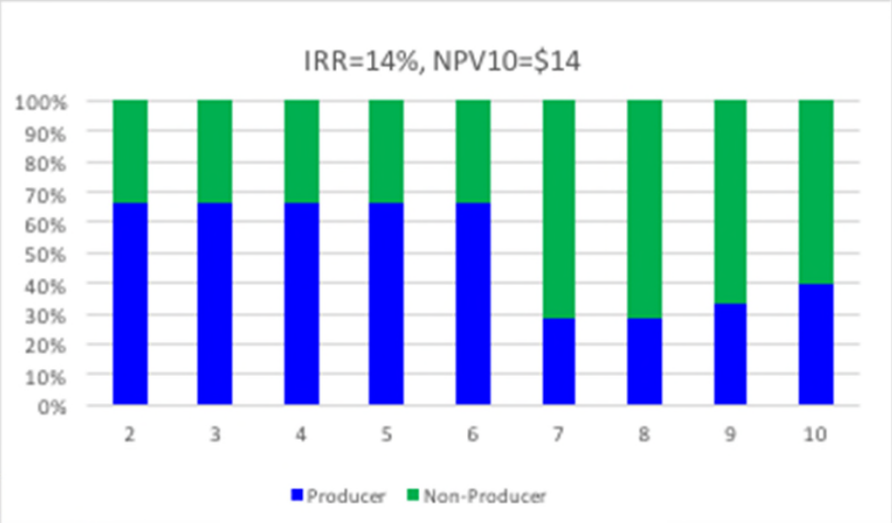
MINI MODEL

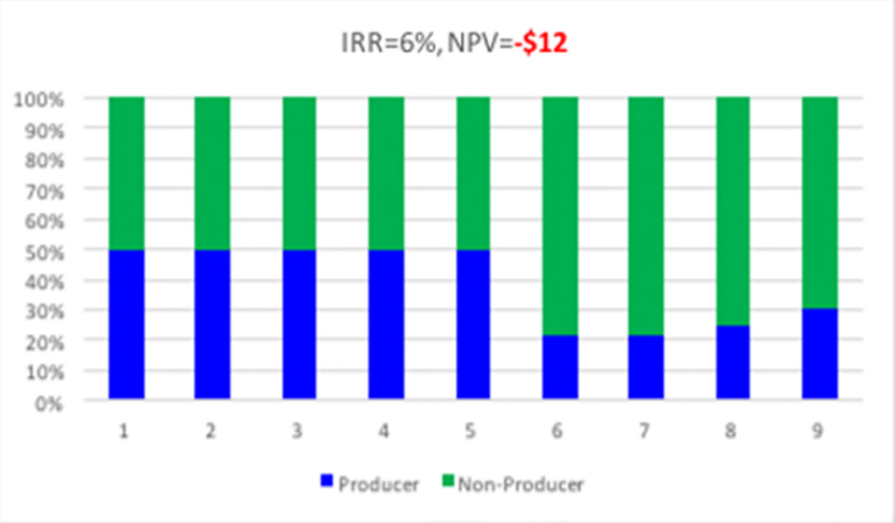
TIMING IMPACT ON PROJECT ECONOMICS

SAME PROJECT, SAME REVENUE, SAME PRODUCER SHARE









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MINI MODEL

THE IMPACT OF TIME ON A PROJECT

FROM “GO” TO “NO GO”

IRR	44%	27%	23%	18%	17%	11%	10%
1	-1000	-1000	-400	-50	-200	-100	-100
2	800	200	-600	-50	-300	-50	-50
3	500	400	200	-50	-300	-10	-10
4	400	800	400	-50	-200	-10	-10
5	300	400	800	-400	200	-5	-5
6		200	400	-400	400	-5	-5
7			200	200	800	-10	-10
8				400	400	-10	-10
9				800	200	-300	-300
10				400		-500	-500
11				200		100	200
12						250	200
13						500	200
14						500	200
15						250	200
16						150	200
17						100	200
18						75	200
19						50	200
20						25	200

- Project:
  - Investment of 1000
  - Total revenue back to the producer of 2000
- Table shows:
  - Different timing scenarios and
  - Different production profiles for the same project
- IRR ranges from 10% (likely not to get approved) to 44% (highly likely to get approved)
- Several scenarios are in the questionable area

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FISCAL SYSTEMS

DESIGN

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COMPONENTS OF A FISCAL REGIME

MORE THAN MEETS THE EYE

- Oil and Gas taxation, and the competitiveness of one regime versus another, is based on items that are not always well understood, discussed, or even made 'visible' in the debate
- There is much more to petroleum fiscal policy than the headline tax rate

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STRUCTURE DRIVERS

FISCAL REGIME TOOLKIT

- So how does the simple math of Revenue – Costs = Taxable Profit become complex?
- As noted earlier, projects and governments have many unique features and drivers
- Fiscal systems are tweaked and modified using one of many different “tools” to achieve a subset of goals and to prevent another subset of unwanted outcomes
- Each of these tools can be deployed in a variety of ways
- While high-level fiscal structures have not changed much, variations on how to handle constituent parts continue to be developed

FISCAL REGIME DESIGN TOOL KIT ITEMS

TYPICAL GOVERNMENT TAKE METHODS IN USE TODAY

- Bonuses
- Bid Fees
- Annual Fees
- Income Tax
- Capital Gains Tax
- Petroleum Tax
- Property Tax
- Excise Duties
- Import Duties
- Ringfencing
- Royalty
- Cost Oil & Caps
- Profit Oil & Split
  - Rate
  - Reserves
  - R Factor
  - IRR
  - Combination
  - Delta Oil/Gas
- Work Program
- Abandonment Bank
- Data Transfer
- Facility Transfer
- Local Market
- Local Content
- Training

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FISCAL REGIME DESIGN TOOL KIT ITEMS

SIGNIFICANT OIL COMPANY ECONOMIC IMPACTS

- Capital Expense
  - Uplift
  - NOLs
  - Inv Credits
  - Depreciation Schedule
  - Recovery
  - Period Recovery Caps
  - Allowed / Disallowed
- Operating Expense
  - Sole Source vs Bidding
  - Affiliates
  - Allowed / Disallowed
  - Overhead
  - Abandonment
- Other
  - Liability
  - Environmental
  - Insurance
  - Employee costs
- Marketing
  - Ultimate sale point
  - Unit valuation point
  - Allowed expenses
  - Affiliated sales

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FISCAL REGIME DESIGN TOOL KIT ITEMS

MANY VARIATIONS OF EACH ITEM IN USE TODAY

- As spreadsheet programs like Excel have become common, more sophisticated tools have been developed to define petroleum taxes or profit splits:
  - R factor
  - S Curve
  - IRR
  - ROI
  - DCF
  - Fairness Index
- A list of all the tools and the different ways in which they are deployed would amount to hundreds of variations

- **That is why Alaska can't be compared to other regimes by just looking at headline tax rates or levels of government take**

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OVER GENERALIZING FISCAL REGIMES

MANY VARIATIONS OF EACH ITEM IN USE TODAY

- For example: “Royalty is X% of gross revenue”
- But in practice Royalty is calculated in numerous ways:
  - Fixed – i.e. same percentage throughout life of lease/contract
  - Variable – royalty changes based on defined parameters such as:
    - Daily production
    - Annual production
    - Cumulative reserves
    - Remaining reserves
    - Some measure of profitability, (R factor, IRR, ROI, DCF)
  - Variable changes can be via sliding scale or step changes
  - Shared with the producer – First Tranche Petroleum
  - Royalty holidays or exemptions granted under defined circumstances

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OVER GENERALIZING FISCAL TERMS

MANY VARIATIONS OF EACH ITEM IN USE TODAY

- Various means of Capital Recovery
  - Depreciation
    - Varying duration - From 1 year to 10+ years
    - Varying methods - Straight line, double declining balance, MACRS, etc.
  - Net Operating Losses
    - Carry forward losses
      - Limit on years
      - Carry back as well
    - Uplift
      - Rate
      - Number of Years
  - Cost Oil
    - Annual caps on recovery (similar to depreciation)
    - Order of recovery, i.e. current operating costs before past capital

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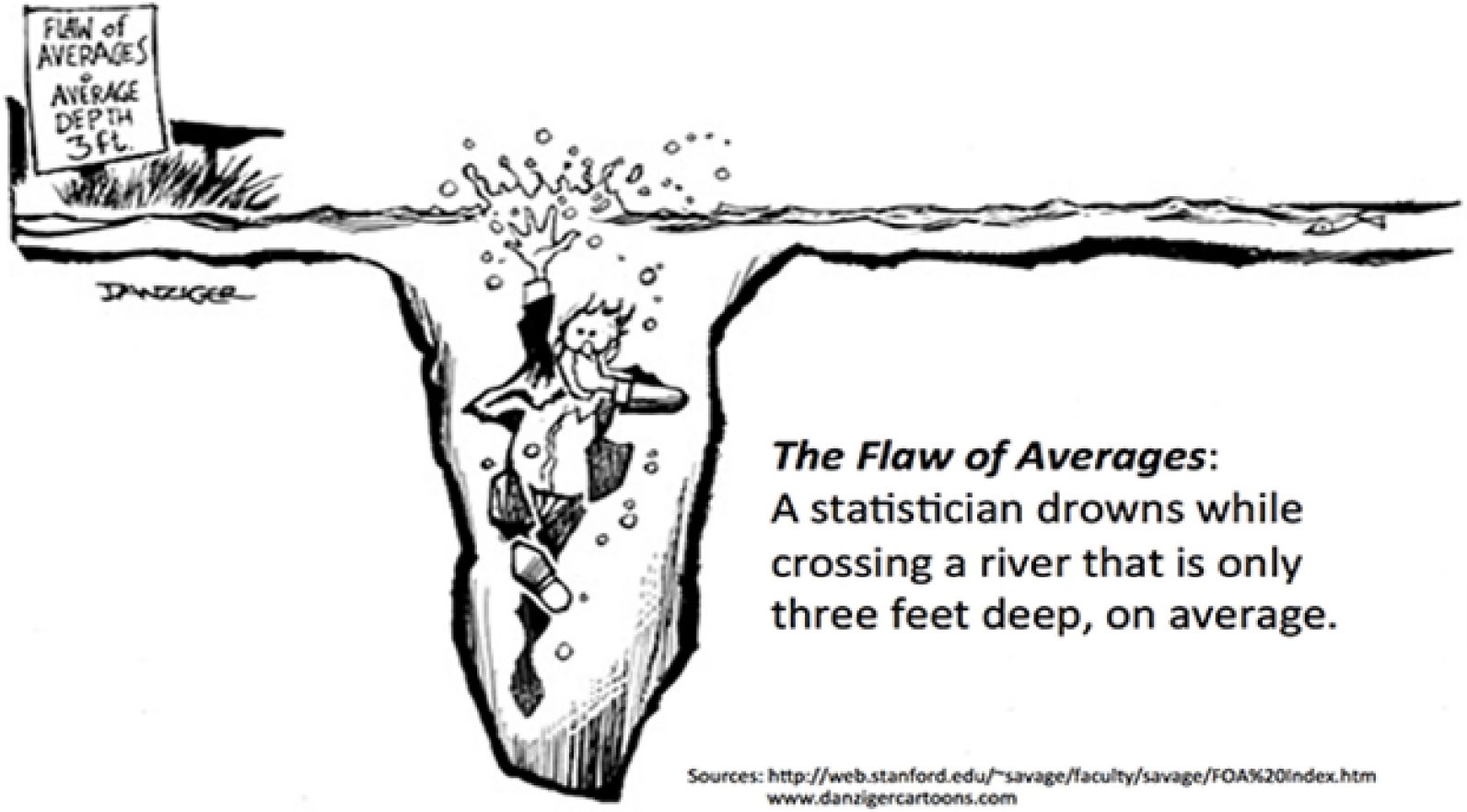
ANOTHER PITFALL: USE OF AVERAGES

OPERATIONS IN EVERY COUNTRY ARE HIGHLY VARIABLE

- All too often regimes are described or, even worse, modelled and compared using average values



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FISCAL SYSTEM DESIGN CONSIDERATIONS

ANTICIPATING AND RESPONDING TO RAPID CHANGE

- USA 2005 looking ahead to 2015
  - Plans for IMPORTING >8 bcf/d of LNG
  - 40+ regasification terminals in permitting
- US 2015, just one decade later
  - Developed a 180 year supply of natural gas
  - ~10 bcf/d EXPORT capacity built or under construction
  - 40+ filings for more liquefaction terminals
- The transition away from fossil fuels could vary significantly from what is desired today

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FISCAL SYSTEM DESIGN CONSIDERATIONS

THE “FIXED” VERSUS “VARIABLE” DEBATE

- With so many options and so many moving parts, a flexible, self-correcting structure is a much more stable structure
  - The industry is in a constant state of change
  - As worldwide and local fiscal conditions fluctuate, the profit available for sharing will change
  - Fiscal structures must be flexible to accommodate this
- Good fiscal design without complementary institutional structures may still not achieve the desired goals
- Fiscal design needs to be within the administrative and audit capacity of the relevant governing institutions
- A simpler system usually proves out to be more viable than a theoretically ideal but complex system

FISCAL SYSTEM DESIGN

HOW TO APPROACH

- First, ask for and expect to be shown something other than a comparative table to explain differences between Alaska and other fiscal systems competing for oil company capital
  - The ‘obvious’ aspects don’t drive investment decisions
  - Understand the true differentiators
  - Ask why your oil companies are spending billions on countries with a ‘higher tax rate’
- Second, establish your drivers or long term goals
  - Multi-generational wealth creation
  - Fill the pipeline
  - Bring power to the villages
- Third, review multiple options modelled against different future scenarios to improve chances of realizing goals
- Last, draw conclusions of competitiveness from a review of all aspects of your multifaceted system

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FISCAL SYSTEM DESIGN

BEWARE THE FLAW OF AVERAGES

- This chart exemplifies how quickly things can change from when major petroleum tax legislation was passed

	Spending ($millions)	Production / day (000)	Production Year (million)	Per Barrel		
				Tarriff & Transport	Opex & Capex	Total Cost
2007	3,201	734.2	268.0	$ 5.40	$ 11.94	$ 17.34
2008	3,560	715.4	261.1	$ 6.05	$ 13.63	$ 19.68
2009	3,688	692.8	252.9	$ 6.38	$ 14.58	$ 20.96
2010	3,525	642.6	234.5	$ 6.01	$ 15.03	$ 21.04
2011	3,858	599.9	219.0	$ 6.67	$ 17.62	$ 24.29
2012	2,975	579.3	211.4	$ 8.37	$ 14.07	$ 22.44
2013	4,442	531.6	194.0	$ 9.76	$ 22.89	$ 32.65
2014	5,212	530.4	193.6	$ 10.42	$ 26.92	$ 37.34
2015	5,615	501.0	182.9	$ 9.72	$ 30.71	$ 40.43
2016	4,842	514.9	187.9	$ 9.88	$ 25.76	$ 35.64

Source: DOR, Ken Alper

PPT
ACES

SB21

HB247

HB111

- However, building a fiscal system off of economic runs based on “averages” does not address reality or the outliers, which are the very things that need to be addressed

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FISCAL SYSTEM DESIGN

TAKEAWAYS

- First, ask for and expect an understanding of competing fiscal systems
- Second, there is no ‘ideal’ structure for sharing the benefits of oil and gas development so understand your drivers
- The pieces of a fiscal system, and how they are deployed, have been undergoing constant change as all parties become more educated. Regardless of the structure:
  - Companies will optimize their operations and profits
  - Which can lead to unintended results
- Each taxing regime is to an extent unique
- **All petroleum taxation structures in use today have biases**

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DEALING WITH UNINTENDED CONSEQUENCES

THE RISKS OF COMPLEX FISCAL SYSTEMS

- By creating, revising, or eliminating one aspect of a complicated tax system, there is a very likely risk that other areas of the tax system will be affected to the detriment of one or more parties

- These **unintended consequences** can undermine the intent of original efforts and are often difficult to see or anticipate

- Before making changes, a thorough analysis should be performed to make sure the level and degree of interdependency of certain taxation terms is understood and addressed

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ALASKA TAX TIMELINE

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HISTORY OF ALASKA OIL AND GAS TAXES

1955-1989

YEAR	SIGNIFICANT EVENT
1955	1% Gross Tax
1960s	Cook Inlet discoveries, LNG Plant
1967	1% temporary emergency tax
1968	Prudhoe Bay discovered, Raise gross tax to 3%
1969	HB75 creates gross rate structure
1970	1st progressive tax, applied to GVPP
1972	Minimum tax added
1973	Revised down progressivity
1977	ELF I, TAPS comes online, Permanent Fund
1981	ELF I amended, tax raise
1989	ELF II

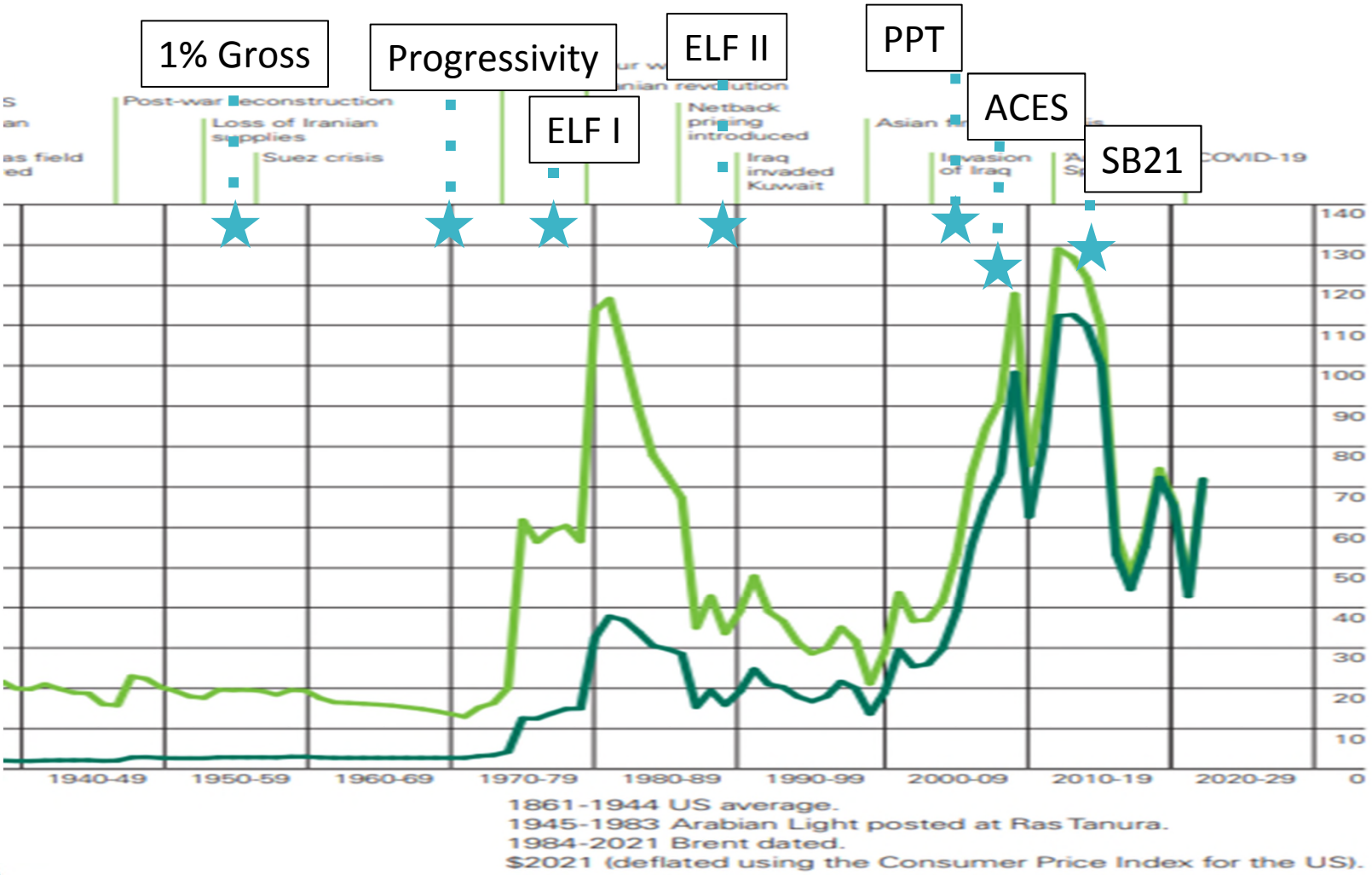
HISTORY OF ALASKA OIL AND GAS TAXES

2002-2017

YEAR	SIGNIFICANT EVENT
2002	1st credit, for contribution to veteran fund
2003	AS 43.55.025 Exploration credits
2005	ELF II amendment; enhanced exploration credits
2006	Major reform, ELFII replaced with Net based PPT, expenditure credits
2007	Major reform, PPT replaced by ACES- gross minimum tax, progressive net tax, multiple incentive credits
2008	AGIA, educational incentive credits added
2010	Incentive credits added and revised
2012	Incentive credits added, caps set
2013	Major reform, ACES replaced by MAPA, SB21
2014	SB138 LNG
2017	HB111, changes to credits

TAX CHANGES VERSUS OIL PRICE

CHANGES COMING AT PEAKS OR VALLEYS



BP Statistical Review of World Energy 2019

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ALASKA'S OIL TAX HISTORY

DRIVERS DICTATE POLICY, IMPORTANT TO GET THEM RIGHT

- Each time taxes were changed there were identified reasons for doing so, sometimes very successful and other times not
  - Some were philosophical drivers, such as increase production on the slope responsibly
  - Others were specific such as bringing a jackup rig to the Cook Inlet

- There are differing opinions whether incentives should have ever been offered but the tax credits for exploration drilling were successful in bringing new players to the slope and in identifying new pools of hydrocarbons

- Alaska has been guided/reminded of Gov. Hammond's original 1/3, 1/3, 1/3 split of the oil wealth
  - One third each to the State, US Federal, and Producer
  - Wealth is synonymous with Income or project profit
  - Sales revenue is not wealth

ACHIEVING ALASKA'S 1/3 "FAIR SHARE"

MOST OFTEN QUOTED DEFINITION

- The most often quoted definition of fair share comes from the writing of Governor Hammond, wherein he notes that at the time of the approval for TAPS the producers, Alaska and the federal government agreed to an even split of the resultant "wealth", giving 1/3 to each party
- This split has often been misrepresented as an agreement to a 1/3 split of revenue, but instead it is a split of "wealth", or profit
- It is impossible to give producers just a 1/3 split of gross revenue, as that amount would not even cover costs to operate and royalties
- If "share" is on gross (versus net) then there would be no producers in Alaska

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ACHIEVING ALASKA'S 1/3 "FAIR SHARE"

MOST OFTEN QUOTED DEFINITION

Oil Price	**80**
Royalty	10
Transportation & Costs	40
Total Out of Pocket for the Prodcuer	**50**
Prodcer Profit	**30**

If split is 1/3 of revenue as many suggest	
State Share	27
Federal Share	27
However…	
Producer Share	27
Producer Costs	50
Producer Loss	-23
Producers would not operate at a loss	

If split is 1/3 on profit	
State Share	10
Federal Share	10
Poducer Share	10

The 1/3 share split should only be discussed as a split of the after-cost value

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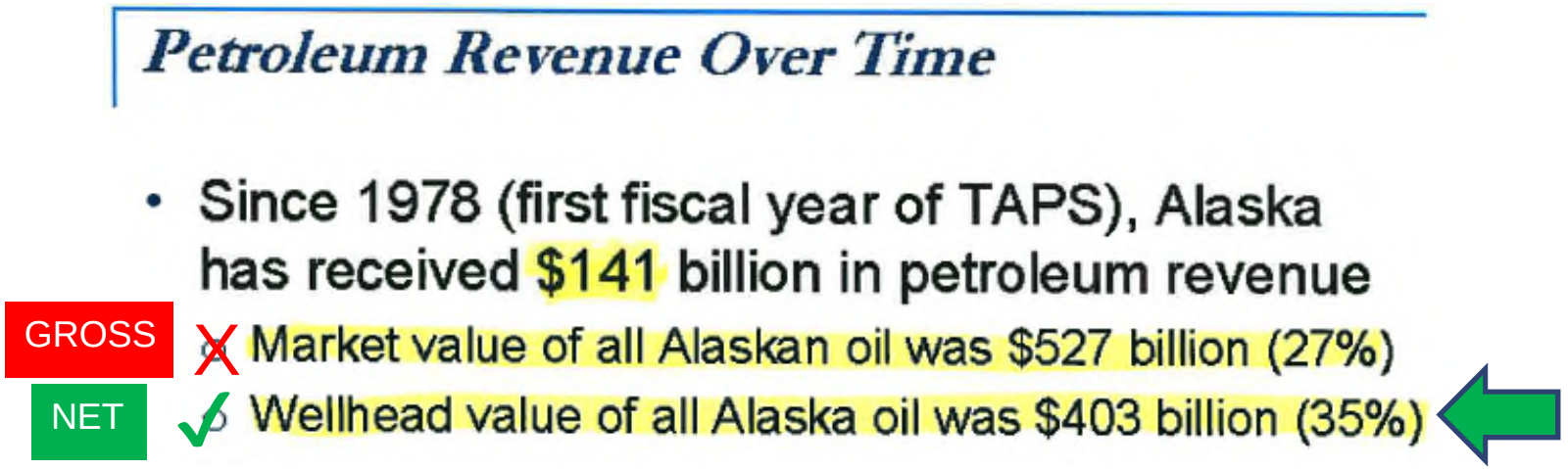
ACHIEVING ALASKA'S 1/3 SHARE

FROM PROMOTIONAL MATERIAL FOR 2020 BALLOT INITIATIVE

- This graphic suggests that in the long run Alaska has received its 1/3 share of the oil wealth
- With a $403 billion total wellhead value (net) of Alaska production, the states portion of $141 billion represents a 35% share
- The remainder of the $527 covered expenses, federal taxes and producer share



Robin Brena presentation , Quoted as a "Ken Alper Slid
Modified for emphasis

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ALASKA'S OIL TAX HISTORY

CHANGING ON THE WORLD STAGE

- But after 40+ years, things are changing- 2023 does not look like 1980
- Alaska was roughly 20-30% of US crude oil reserves for the better part of 3 decades, until the emergence of shale development
- As of 2022, Alaska is now only 8% of US reserves and 0.1% of global reserves
- Geopolitical issues and events are forcing changes
  - Banks refusing to fund artic development
  - Oil companies marching towards 0 emissions
- More important now to look at events outside of Alaska or to look to possible future scenarios to decide how workable and robust your fiscal system for oil is, and consider how to incorporate gas

THANK YOU

QUESTIONS?

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be in the know

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