

ALASKA LEGISLATURE COMMITTEE FILES 2007-2008 RES 12697

Legacy Fields: Marginal Tax Rate



- Look at share of the incremental dollar going to government (marginal tax rate [MTR])
 - Derived by looking at total per barrel government revenues at one price, and then increasing the price by one dollar
 - The difference in per barrel government revenues (from that at the lower price) is the marginal tax rate
 - Increasing the price by one dollar has no effect on costs
 - Cost issues are minimized
 - Limitations of annual “share” data

Alaska and its Competitors



- **Governments use two major methods to take their fair share**
- **Royalty & Production Taxes**
 - Developed nations
 - Stable democratic governments
 - Diverse economies
- **Production Sharing Contracts (PSC)**
 - Developing nations
 - Less stable governments – fiscal system administered by contract
 - Oil centered economies – better geology
- **Alaska should be compared with tax/royalty jurisdictions**
 - UK, Norway, Gulf of Mexico, Alberta, Canada
 - Under PPT & ACES, Alaska government take & MTR is between UK and Norway

Fundamental Changes from Past Efforts

ACES
Alaska's Clear and Equitable Share

- **Data base**
 - More exhaustive inventory of international jurisdictions (PFC effort)
 - Real projects (PFC effort)
 - Internal Schlumberger PEEP model with detailed fiscal systems – real projects analyzed
- **Two fundamental changes to approach**
 - Differences between legacy and new fields
 - Comparison to relevant competition

Government and Petroleum Tax Take

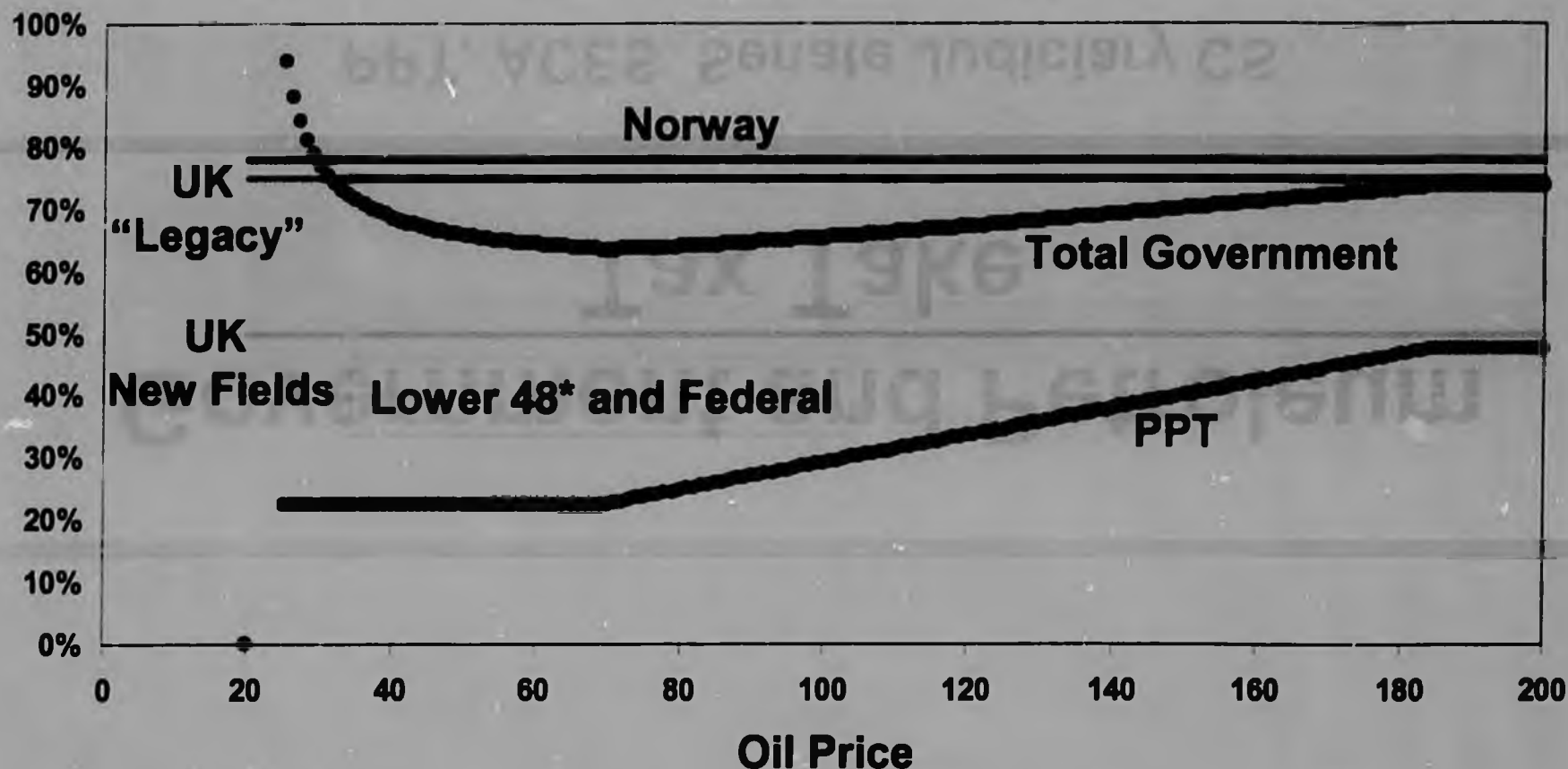
**PPT, ACES, Senate Judiciary CS
Compared To UK, Norway, US Lower 48**



Government Take PPT



* For Lower 48, State lands / Federal assumes with 12.5% - 18.75% royalty. Private royalty trend is higher

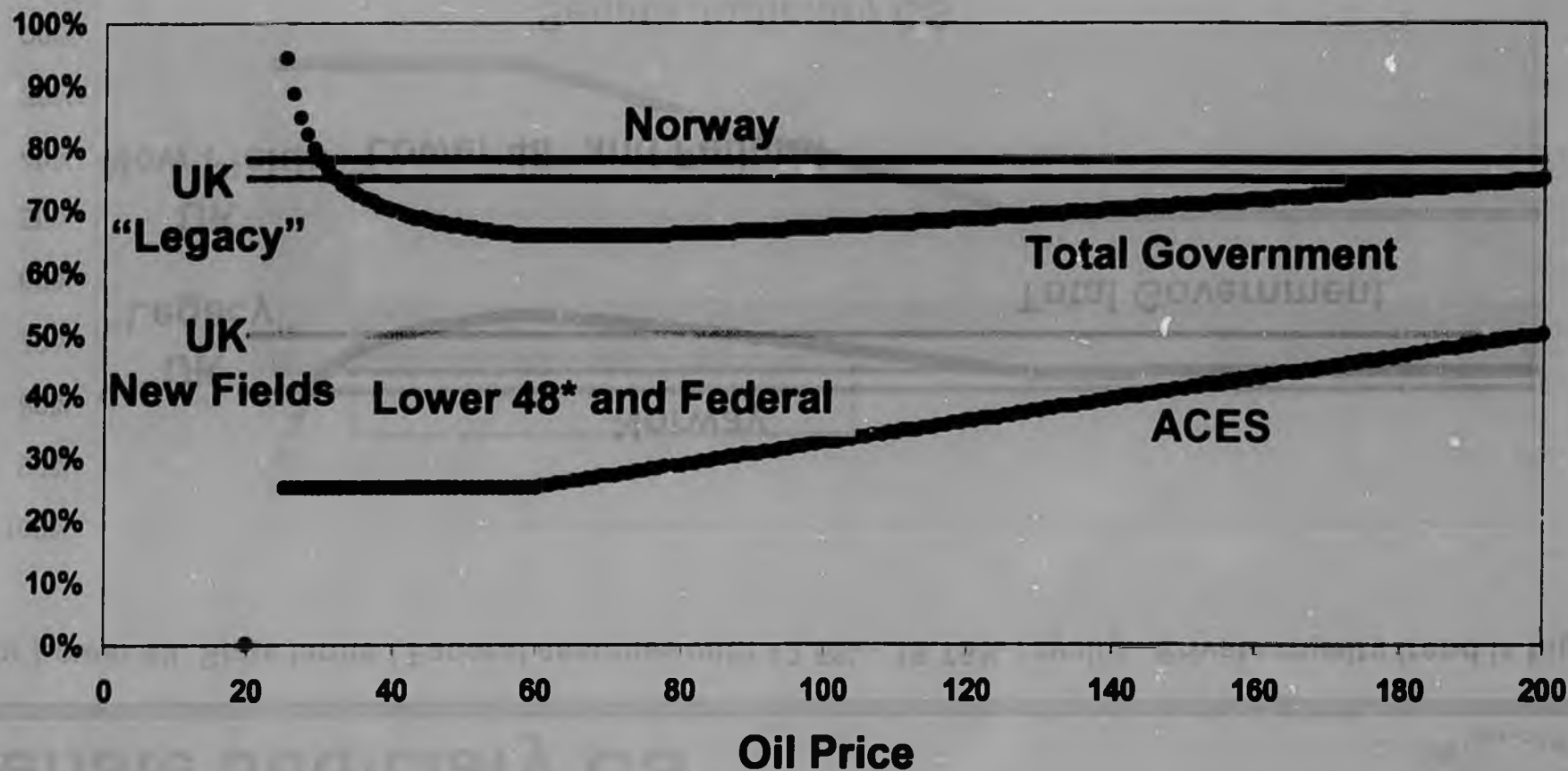


Assumes \$20 costs

Government Take SB 2001 (ACES)



* For Lower 48, State lands / Federal assumes with 12.5% - 18.75% royalty. Private royalty trend is higher

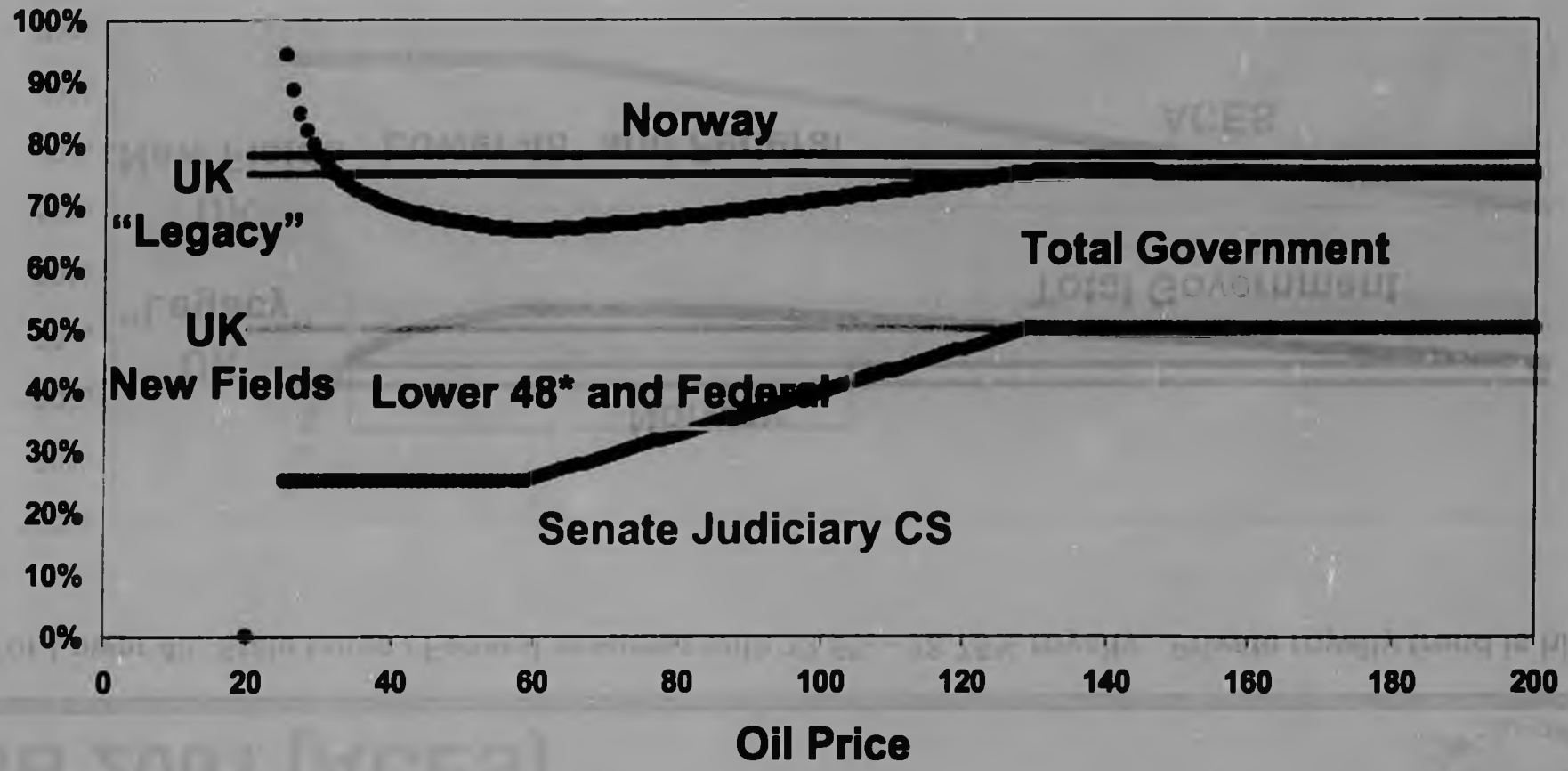


Assumes \$20 costs

Government Take Senate Judiciary CS



* For Lower 48, State lands / Federal assumes with 12.5% - 18.75% royalty. Private royalty trend is higher



Assumes \$20 costs

SB

2001

(FILE 11)

10/21/07

ALASKA STATE LEGISLATURE



**Joint Meeting
Senate Resources and
House Oil and Gas
House Finance Room 519
Sunday, October 21, 2007
1:00 p m.- 6:00 p.m.**

AGENDA

**SB 2001/HB 2001 - Oil and Gas Production Tax
Presentation by: Governor's Production Tax Team**

**III - ACES Preserves Investment Climate
and
Sectional Analysis of SB 2001/HB 2001**

Patrick Galvin, Commissioner, Dept. of Revenue

Tony Finizza, Consulting Economist

Cherie Nienhuis, Petroleum Economist, Dept. of Revenue

Kevin Banks, Acting Director, Division of Oil & Gas

Robert Mintz, Preston Gates

Marcia Davis, Deputy Commissioner, Dept. of Revenue

Michael Williams Chief Economist DOR.

Sharon Long

Sunday Jim Mintz

From: Konrad Jackson

Sent: Sunday, October 21, 2007 10:42 PM

To: Ken Erickson; Bud Curtis; Brodie Anderson; Cheryl Sutton; Christian Gou-Leonhardt; Crystal Koeneman; Hannah McCarty; Jane Pierson; Linda Hay; Louie Flora; Mary Jackson; Rep. Beth Kertula; Rep. Bob Buch; Rep. Jay Ramras; Rep. Kurt Olson; Rep. Lindsey Holmes; Rep. Mark Neuman; Rep. Mike Doogan; Rep. Nancy Dahlstrom; Rep. Ralph Samuels; Rep. Scott Kawasaki; Rex Shattuck; Ryan Jager; Sharon Long; Susan Wallen; Tom Wright; House Records General email Account; Peg Warren; Suzi Lowell

Subject: FW: 10-21-07 meeting materials

Attachments: 10-21-07 -Banks final Revised2.ppt; 10-21-07 Finizza Final.ppt; 10-21-07 Packet Information.doc; 10-21-07 Sectional -Mintz.ppt; Agenda.doc; Costs presentation_cn_20071021.ppt; Intro and Equal Value for Explorers.ppt; NS_og_activitymap_apr07_200dpi.pdf; Annual Employment Earnings.pdf; Banks to Stedman memo - Tax Comparison.pdf

Here is a better description and a complete(*) set of documents presented in today's joint hearing:

In order of attachment:

"Banks final revised"

Division of Oil & gas testimony given by Kevin Bank, Acting Director; before joint meeting of House Oil & Gas and Senate Resources Committees on October 21, 2007.

"Finizza final...."

"ACES" Power Point presentation given by Dr. Tony Finizza, PhD, consulting economist for the Dept. of Revenue and Patrick Galvin, Commissioner, Dept. of Revenue; before joint meeting of House Oil & Gas and Senate Resources Committees on October 21, 2007.

Ignore / delete the "packet information" attachment. No documents were available by publication time

"Sectional -Mintz"

Distributed by Robert Mintz, with K&L Gates, acting as consultant to Dept. of Revenue; No presentation of this document was given during joint meeting of House Oil & Gas and Senate Resources Committees on October 21, 2007.

(This will be presented by Mr. Mintz at a later date)

"Costs presentation"

Power Point presentation given by Cherie Nienhuis, Petroleum Economist, Dept. of Revenue and Patrick Galvin, Commissioner Dept. of Revenue; before joint meeting of House Oil & Gas and Senate Resources Committees on October 21, 2007.

"Intro and equal..."

Administration's planned presentation agenda for joint meeting of House Oil & Gas and Senate Resources Committees on October 21, 2007.

"NS_og..."

Alaska North Slope area oil & gas activity map presented by Kevin Banks, Acting Director, Div. Oil & Gas; before joint meeting of House Oil & Gas and Senate Resources Committees on October 21, 2007.

"Annual Employment..."

Annual Employment Earnings Report distributed by Representative Mike Doogan in joint House Oil & Gas and Senate Resources Committees on October 21, 2007.

Img-X211429-0001 included in this mornings email can be deleted. It is replaced with a more complete document now titled "Annual Employment Earnings" (formerly known as img-X211434-0001). #X211429 is included as the

10/22/2007

last page in this document.

"Banks to Stedman memo"

Distributed by Senator Stedman during joint House Oil & Gas and Senate Resources Committees on October 21, 2007.

* An additional document will be forwarded as soon as I receive it. This was a short presentation by Rich Ruggiero of Gaffney, Cline and Assoc.

Say good night Gracie

Konrad Jackson
Staff to Representative Kurt Olson
phone - 907-465-2693
fax - 907-465-3835

10/22/2007

The Cost Story

**Alaska Department of Revenue
October 21, 2007**

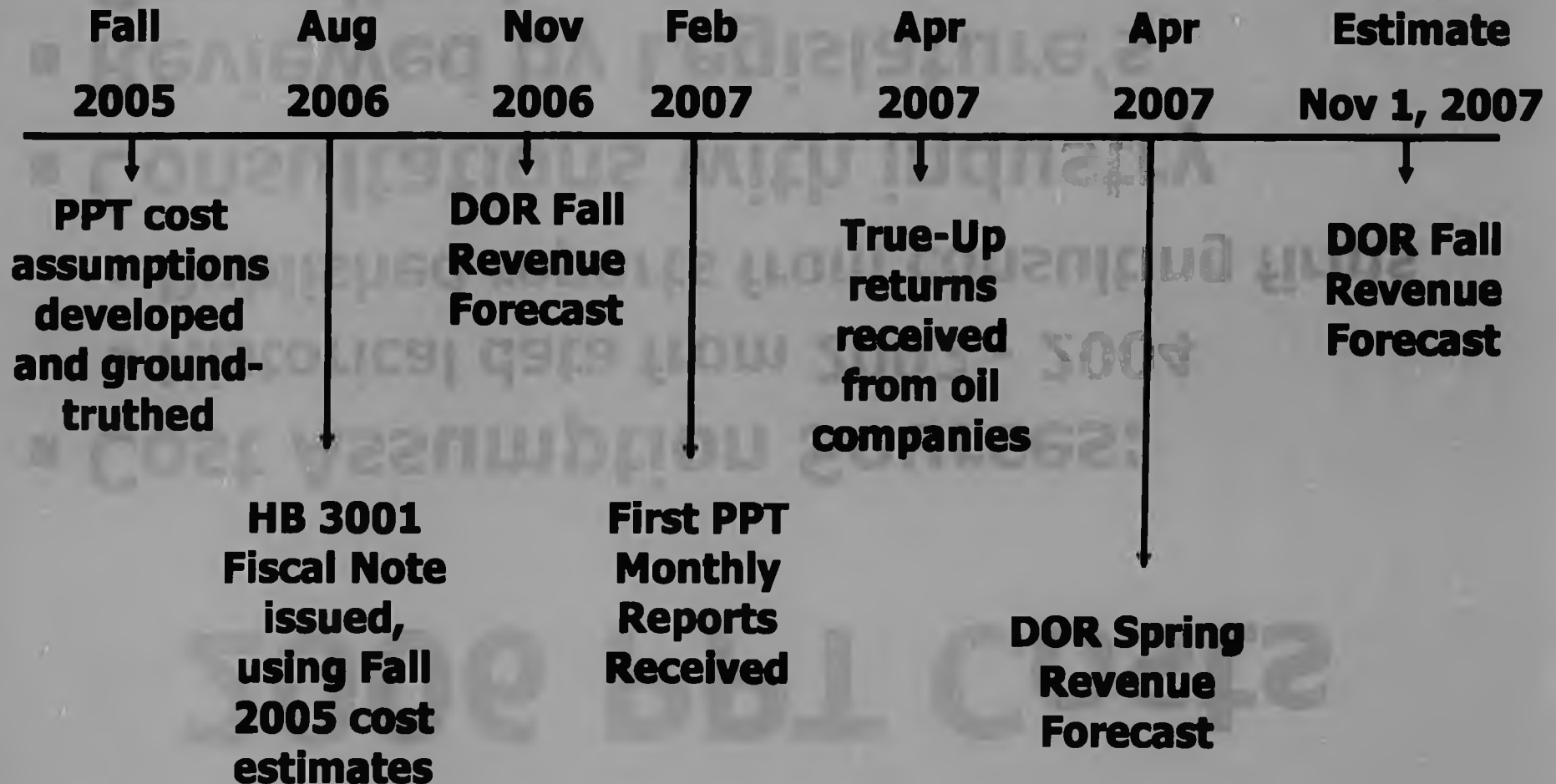
Production Tax Revenue Involves Three Unknowns

- **Production**
- **Price**
- **Costs – Operating
and Capital**

2006 PPT Costs

- **Cost Assumption Sources:**
 - **Historical data from 2002 - 2004**
 - **Published reports from consulting firms**
- **Consultations with industry**
- **Reviewed by Legislature's Consultants**

PPT Forecast Timeline



How our Assumptions Changed

- **Costs have been adjusted based on actual PPT tax return filings**
- **Costs are now expressed in nominal dollars (have inflation component)**
- **Additional data has become available on which to base future costs**

Capital Spending as Reported in PPT Tax Returns, March 2007 and 2007 Forecast

Calendar Year	Capital Spending in Alaska in \$millions nominal
2002	\$1,296.7
2003	\$1,186.8
2004	\$1,136.9
2005	\$1,268.0
2006	\$1,665.3
2007	\$1,817.0



Cost Forecasts

North Slope Production and Costs FY 2008, per HB 3001 Fiscal Note and Spring 2007 Forecast

	HB 3001 Fiscal Note	Spring 2007 Forecast
Production (barrels per day)	802,000	764,000
Operating costs (\$millions)	\$1,076	\$2,160
Capital costs (\$millions)	\$1,052	\$1,900
Total Costs	\$2,128	\$4,060
Total Costs per Barrel	\$7.27	\$14.56
Operating costs per barrel	\$3.68	\$7.75
Capital costs per barrel	\$3.59	\$6.81

Current Revenue Forecasts

Actual

DOR Forecast

Estimated Production Tax Payments (in \$millions)		Three Month Tax Calculation	
July 2007	\$184.5	Average Price	\$72.96
Aug 2007	\$213.5	Less Transport	-\$6.44
Sep 2007	\$166.7	Wellhead Value	\$66.52
Total Payments - Quarter	\$564.7	Times production	0.702407
less estimated credits & refunds	\$50.0	Times days in Qtr	92
Total Quarter	(\$514.7)	Total prod value	\$4,298.4
		Less Royalty	-\$537.3
		Total value at Pt. of Prod.	\$3,761.1
Production	mmBbls/day		
July 2007	0.724636	Capex/bbl	\$7.80
Aug 2007	0.724564	Opex/bbl	\$8.35
Sep 2007	0.658021	Total Capex	\$513.0
Average	0.702407	Total Opex	\$525.0
		Production Tax Value	\$2,723.1
Price	\$/bbl ANS WC		
July 2007	\$69.11	Tax Rate	22.5%
Aug 2007	\$75.93	Tax b/f credits & progressivity	\$612.7
Sep 2007	\$73.83	Progressivity tax rate	2.0%
Average	\$72.96	Progressivity Surcharge	\$54.5
		Tax before credits	\$667.2
		Capex credits	\$153.9
		Total after credits	(\$513.3)
		Percent Error	0.3%

Tools for Forecasting Costs

- ***Require cost reporting (current and forecast)**
- ***Monitor data submitted to DOR**
- ***Monitor data submitted to other agencies (e.g. plans of development)**
- **Monitor publicly available information (e.g. economic indicators, labor and material costs)**

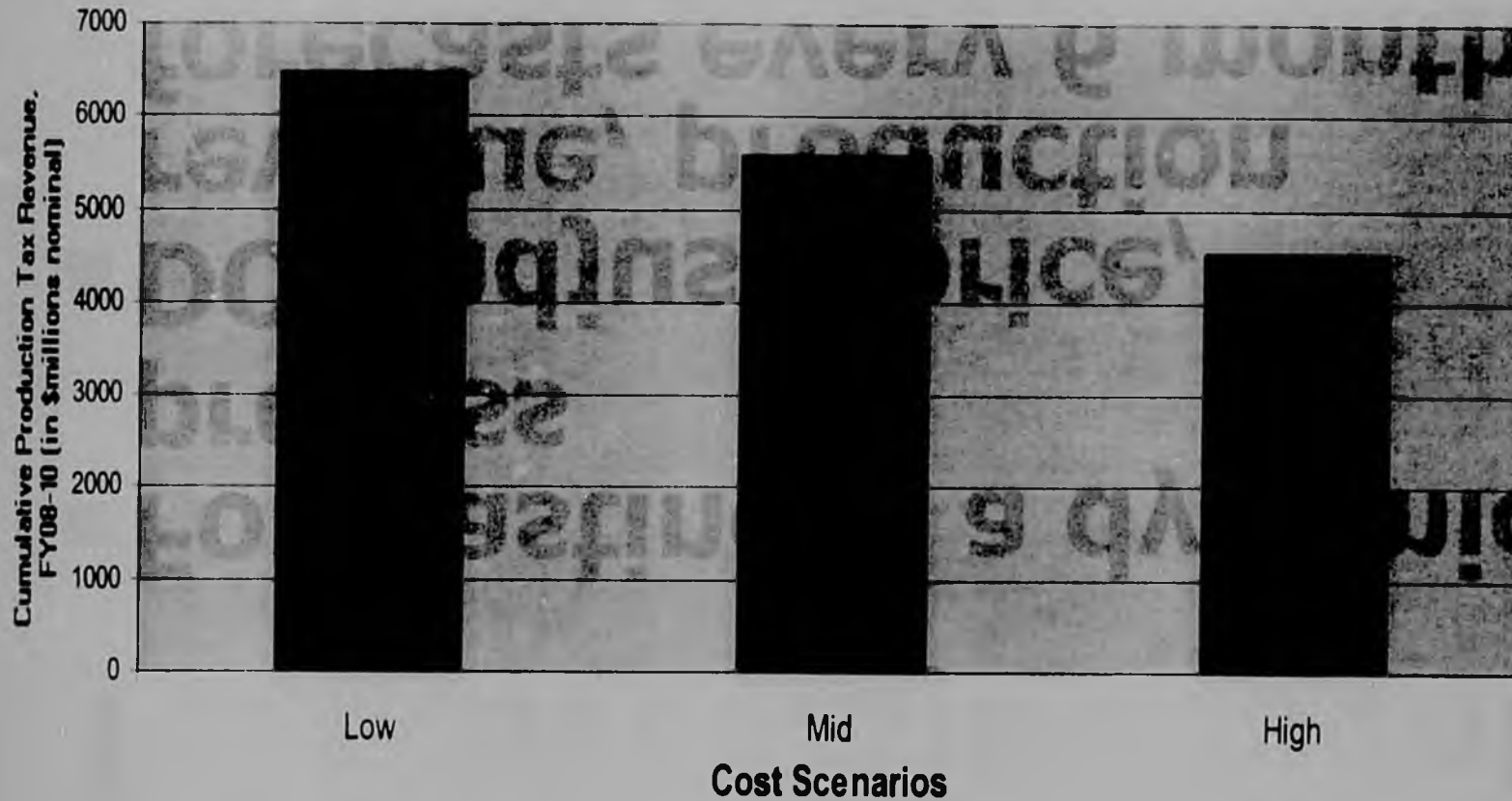
***New Enhanced Tool Under ACES**

Three Cost Forecasts

- **Mid, Low, and High**
- **All Costs in Nominal Dollars**
- **Forecasts reflect different assumptions about unplanned maintenance costs, spending behavior; not simply a +/- 20%**
- **Costs and investments reflect oil price changes**

Impact of Low, Mid, and High Forecasts on Tax Revenues

Cumulative Forecasted Production Tax Revenues, FY 08 - 10, at \$60/barrel ANS WC, under Three Cost Scenarios



Forecast Adjustments

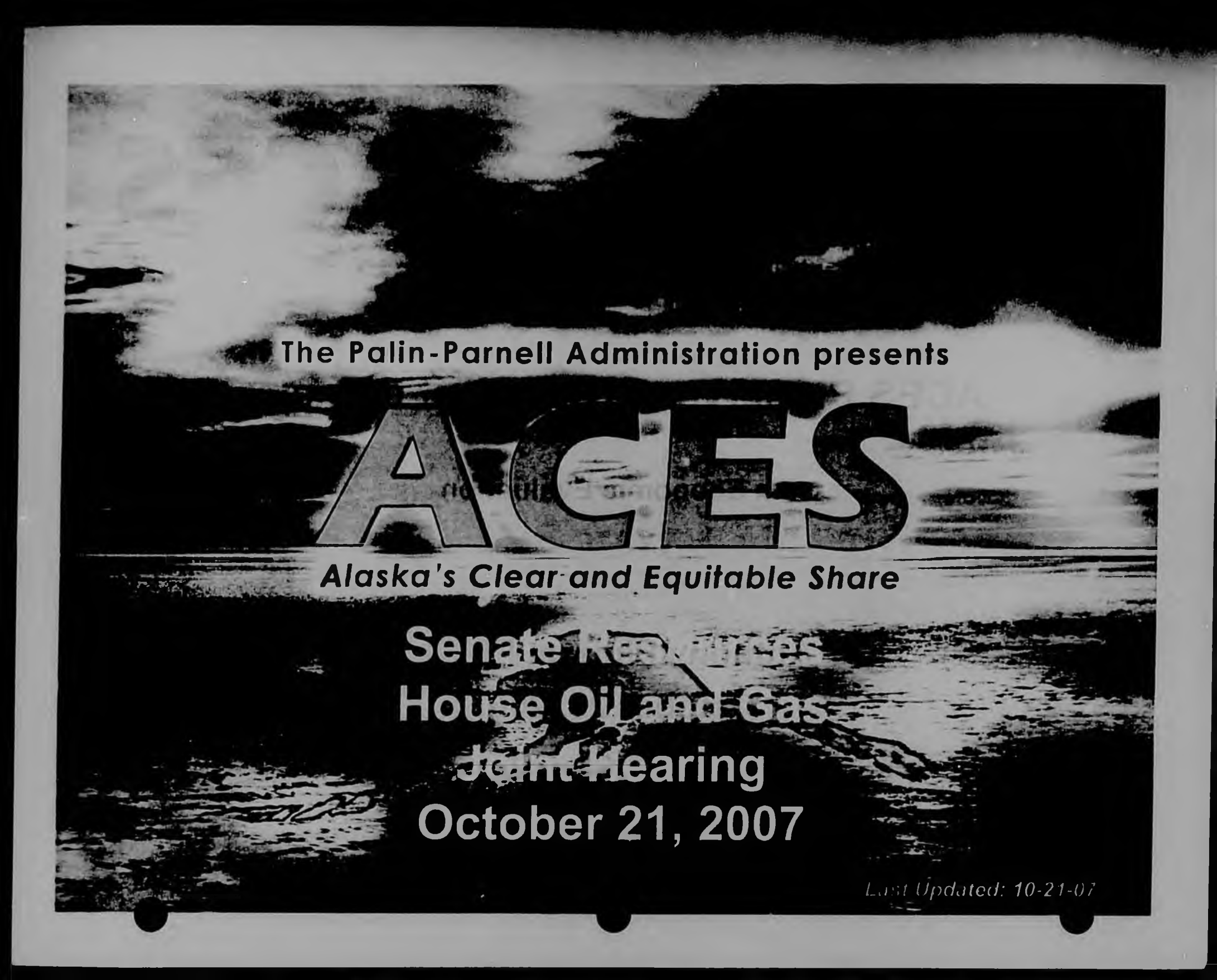
- **Forecasting is a dynamic process**
- **DOR adjusts price, revenue, production forecasts every 6 months**
- **Cost forecasts to be reviewed quarterly and adjusted as necessary**

Forecasting Improved Through ACES

- **ACES requires more complete cost reporting, both monthly and annually**
- **ACES requires forward-looking cost information**
- **ACES provides clearer rules for defining lease expenditures**
- **ACES improves audit function**

Costs Policy Implications

- **Costs of production should not be ignored in tax policy**
- **Understanding industry costs benefits the state**
- **Cost sharing through credits puts state in "partnership" with industry**



The Palin-Parnell Administration presents

AACES

Alaska's Clear and Equitable Share

Senate Resources
House Oil and Gas
Joint Hearing
October 21, 2007

Last Updated: 10-21-07

ACES

Alaska's Clear and Equitable Share

ACES Preserves Investment Climate

An Economic Evaluation

Anthony Finizza, Ph. D.

October 21, 2007

ACES

ACES

Alaska's Clear and Equitable Share

Framework and Methodology for Analysis

Financial Metrics

Producer Economic Metrics

- **NPV – Net Present Value (“Value today of Project Cash Flows”)**

Metrics Used

ACES

Alaska's Clear and Equitable Share

	Legacy Fields	New Fields	
Producer Point-of-View	"Reinvestment Economics"	"Investment Economics"	
Financial Evaluation	Net Cash Flow NPV10	Net Cash Flow NPV10	Does the project have NPV>0 at stress price?
Alaska Point-of-View	Marginal Government Take	Life Cycle Discounted (10%) Government Take	Does the SOA receive a fair share of the economic profit?
"Fairness"			

Financial Criterion Net Present Value (NPV)



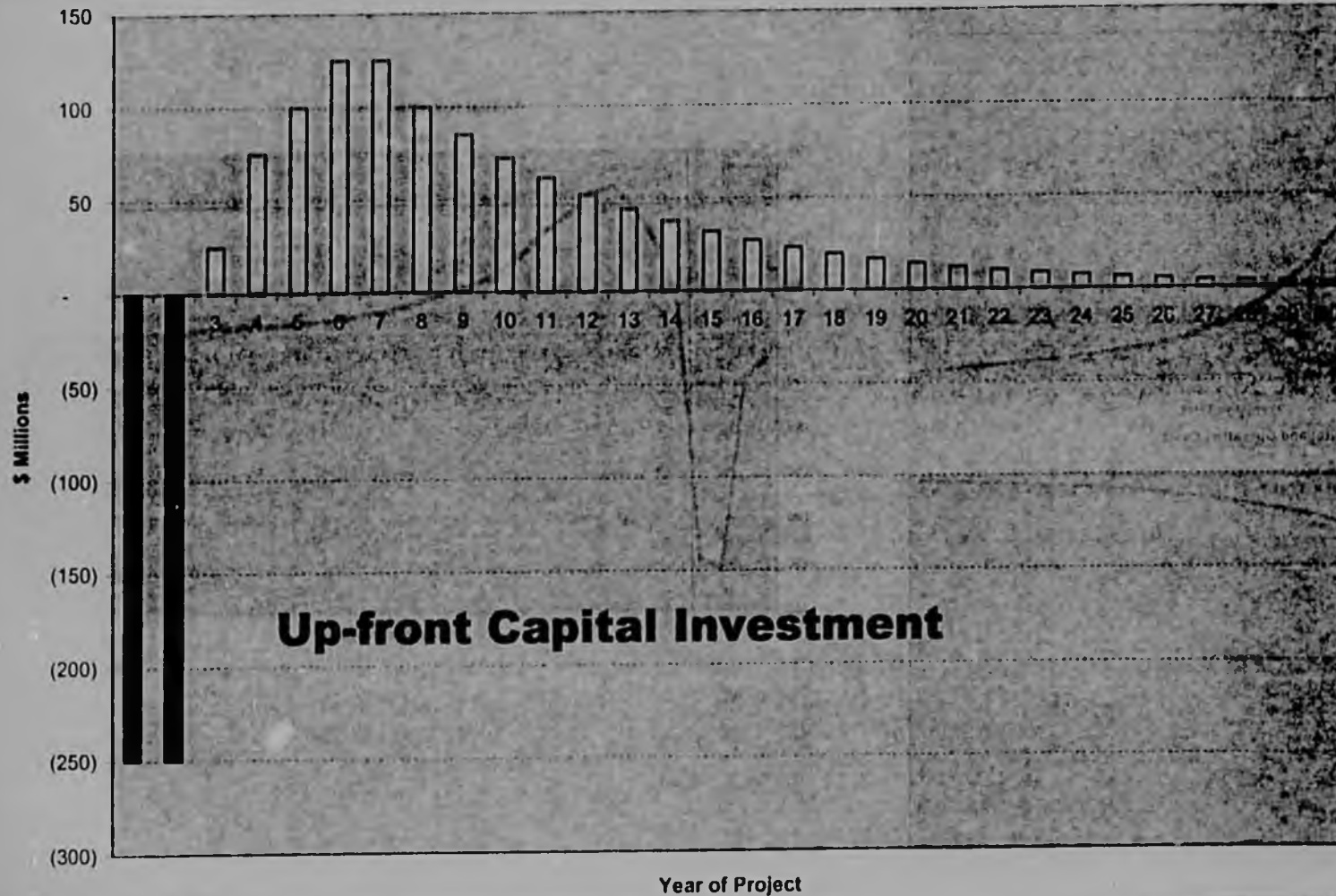
- **Present value of future cash flows including capital investment**
- **This is the “supreme” financial metric since a project with a positive NPV adds value to the firm**
 - **Value of the firm = PV of all future cash flows**
 - = PV of cash flows from assets in place**
 - + PV of cash flows from future investments**
- **Future cash flows discounted at rate that represents uncertainty of cash flows and when they are expected**
- **If a project generates cash in excess of that to compensate for the risk taken, the value of the firm increases**

Stylized Project Cash Flow

ACES

Alaska's Clear and Equitable Share

Net Cash Flow from Production

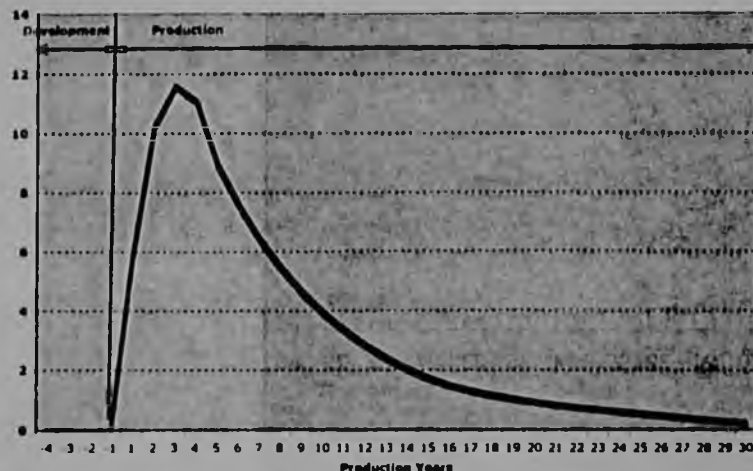


Cash Flows for New Fields

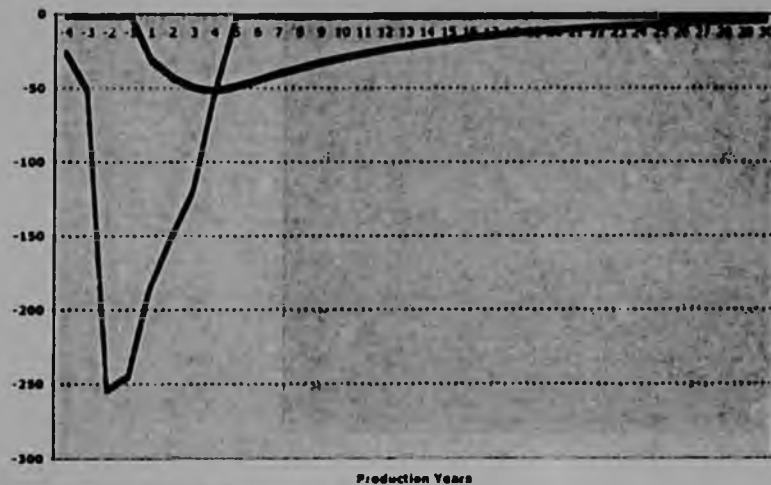
ACES

Alaska's Clear and Equitable Share

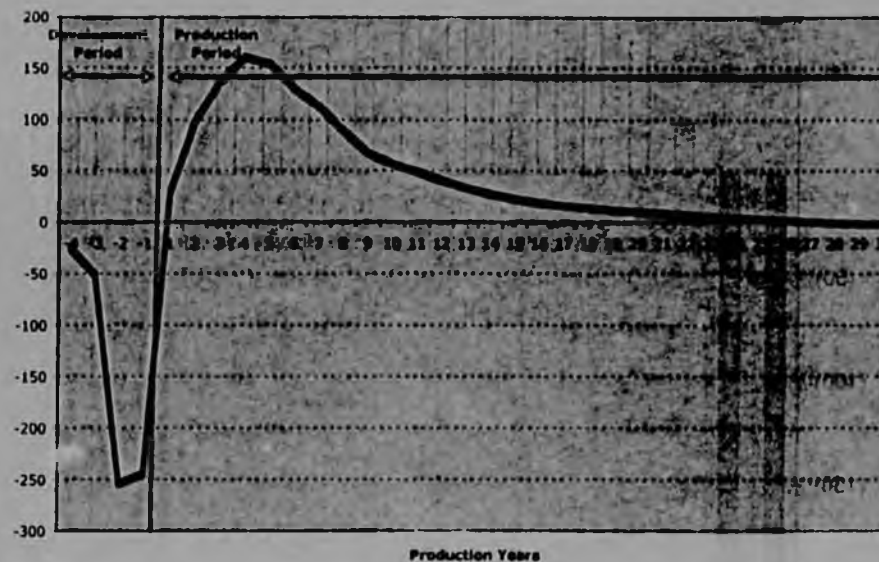
Annual Production



Capital and Operating Costs



Annual Net Cash Flow



Producer View of Future Oil Prices

ACES

Alaska's Clear and Equitable Share

- **Producers have been “burned” by forecasts of high oil prices in the past**
- **The consequences of error are not symmetrical**
- **Producers will test their projects against a price path that is below their “Most Likely” view**
 - **They use the “official price view” as a speed limit to signal caution**
 - **By “high-grading,” they will have a suite of projects resilient to price risk**
 - **Their price view lags the current market price by as much as 5-7 years as prices rise, and by 2 years as prices fall.**
 - **Current “best guess” view might be: \$50/barrel**
 - **Producers will also “stress” test their projects at \$40/barrel**

Common Assumptions Used In Analyses



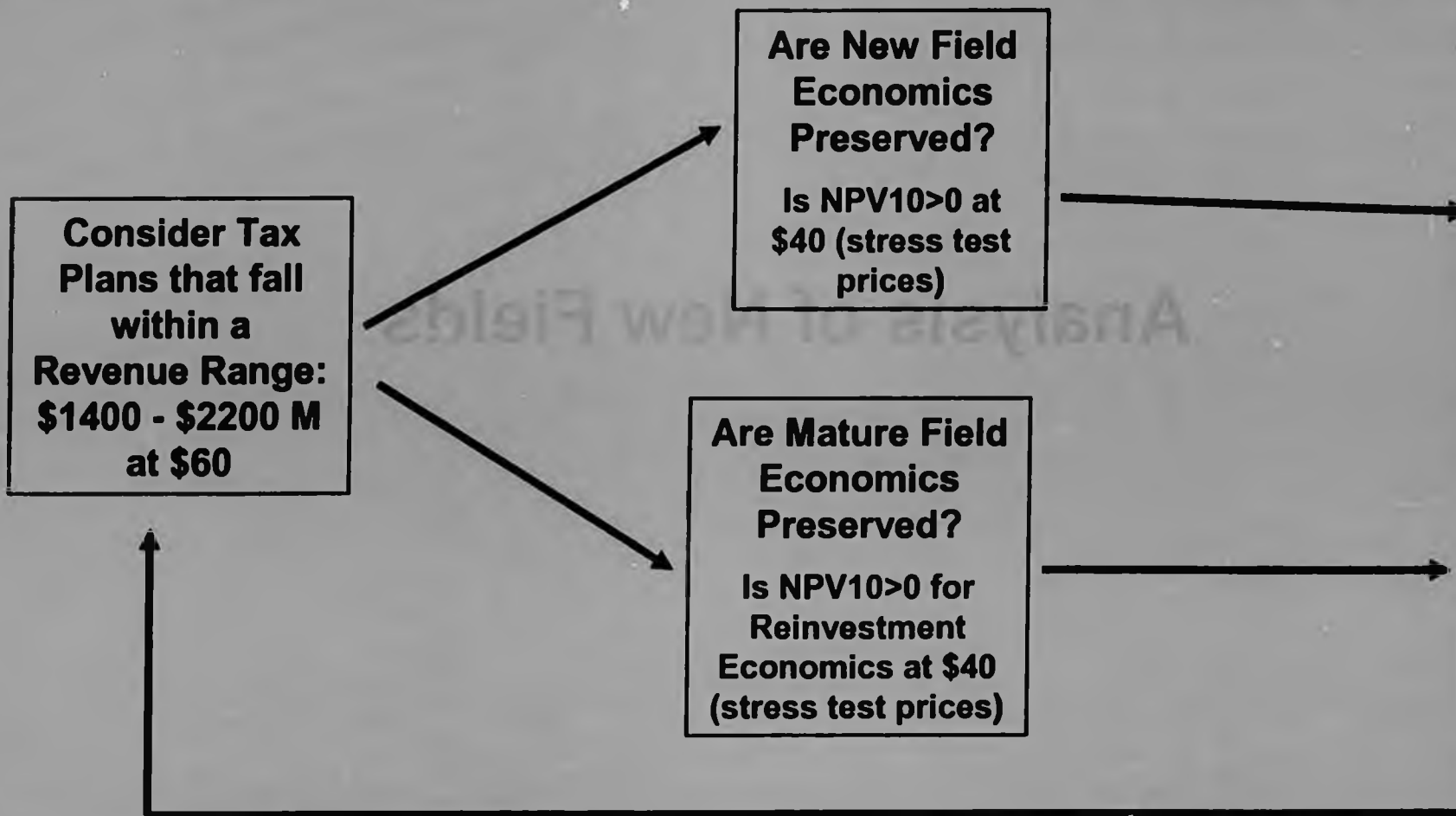
For comparing results, we have used a common set of assumptions:

- **Oil prices:**
 - Base case price; \$60
 - Stress test price: \$40
 - Analysis done at price continuum from \$20 to \$100
- **Inflation: 3% per year**
- **Producer discount rate: 10% and 15% (results shown at 10%)**
- **State discount rate: 5% and 8% (results shown at 5%)**

Tax Plan Evaluation Process

ACES

Alaska's Clear and Equitable Share



ACES

ACES

Alaska's Clear and Equitable Share

Analysis of New Fields



Seven New-Fields Analysis

ACES

Alaska's Clear and Equitable Share

- Hypothetical fields based on operating and capital costs, and production profiles of known field types
- Source of information derived from publicly available data, and industry information supplied in state agency interactions

Characteristics of Seven Fields



- A: Medium heavy oil satellite in existing mature unit
 - B: Offshore small reserves
 - C: Satellite in existing unit
 - D: Remote field
 - E: New unit with very heavy oil
 - F: Offshore medium reserves
 - G: New unit with large reserves
-
- Reserves range from 40 to 300 MB
 - Various combinations of ownerships among incumbents, small producers, new entrants

Characteristics of the Seven Fields

	Field A	Field B	Field C	Field D	Field E	Field F	Field G
Legacy Field	●						
Satellite	●	●	●		●		
Stand Alone				●		●	●
Heavy Oil	●				●		
Reserves (MMB)	80	60	40	200	100	120	320
Ownership	Existing	New	Existing	New	Existing	New	Existing
Capital (\$ / B)	\$11	\$10	\$11	\$13	\$16	\$8	\$5
Expense (\$ / B)	\$7	\$9	\$8	\$12	\$8	\$5	\$6

Tax Scenarios

(A small sample of scenarios considered)

ACES

Alaska's Clear and Equitable Share

- Net
 - ACES: 10% Floor
 - ACES: No Floor
 - PPT (Status Quo)
 - 35% Mature Fields / 22.5% Other
- Gross
 - 13% / No credits
 - 16% / With 20% credits
 - 16% / No credits
 - 19% / With 20% credits
 - Back-end loaded progressive tax table / With 20% Credits

**** All Models use a progressivity factor**

ACES

DESCRIPTION OF NEW FIELD MODEL

Alaska's Clear and Equitable Share

CASH FLOW SCHEMATIC FOR SINGLE YEAR

NET PRESENT VALUE

TOTAL REVENUES: (VOLUME X ANS WEST COAST PRICE)	DISCOUNTED NET CASH FLOW YEAR	1
Less: Shipping	+ DISCOUNTED NET CASH FLOW YEAR	2
TAPS Tariff =	+ DISCOUNTED NET CASH FLOW YEAR	3
<input type="checkbox"/> GROSS VALUE (AT THE POINT OF PRODUCTION)	+ DISCOUNTED NET CASH FLOW YEAR	4
Less: Upstream Capital Costs	+ DISCOUNTED NET CASH FLOW YEAR	5
Upstream Operating Costs =	+ DISCOUNTED NET CASH FLOW YEAR	6
DIVISIBLE INCOME	+ DISCOUNTED NET CASH FLOW YEAR	7
Less: Royalties =	+ DISCOUNTED NET CASH FLOW YEAR	8
TAXABLE INCOME FOR PRODUCTION TAX	+ DISCOUNTED NET CASH FLOW YEAR	9
Less: Production Tax =	+ DISCOUNTED NET CASH FLOW YEAR	10
TAXABLE INCOME FOR INCOME TAX	+ DISCOUNTED NET CASH FLOW YEAR	...
Less: State Corporate Income Tax	+ DISCOUNTED NET CASH FLOW YEAR	...
Federal Corporate Income Tax =	+ DISCOUNTED NET CASH FLOW YEAR	...
NET CASH FLOW FOR A SINGLE YEAR	+ DISCOUNTED NET CASH FLOW YEAR	Last Year =
	NET PRESENT VALUE	

ACES

Alaska's Clear and Equitable Share

New Field Tax Analysis - NPV Impact

NET PRODUCTION TAX SCENARIOS

Scenario	Rate		Progressivity		Capital Investment Credit	Industry NPV @ 10% at \$40/bbl real ANS WC (mm\$)						
	Mature Fields	Other Fields	Trigger	Rate		Field A	Field B	Field C	Field D	Field E	Field F	Field G
	ACES - 10% Floor	25.0%	25.0%	\$30	0.0020	20%	10	60	40	40	(500)	210
ACES - NO Floor	25.0%	25.0%	\$30	0.0020	20%	120	60	40	40	(300)	210	1,000
PPT Status Quo	22.5%	22.5%	\$40	0.0025	20%	180	50	60	10	(200)	220	1,100
High Net Tax	35.0%	22.5%	\$30	0.0030	20%	150	50	50	0	(200)	140	1,100

GROSS PRODUCTION TAX SCENARIOS

Scenario	Rate	Other Incentives	Progressivity		Capital Investment Credit	Industry NPV @ 10% at \$40/bbl real ANS WC (mm\$)						
	(All Fields)		Trigger	Rate		Field A	Field B	Field C	Field D	Field E	Field F	Field G
Low Rate - No Credits	13%		\$40	0.0020	None	(30)	(40)	(30)	(500)	(600)	80	700
Medium rate	16%		\$40	0.0020	20%	30	0	0	(300)	(600)	130	800
Former Tax no ELP	16%		NA	NA	none	(40)	(50)	(30)	(400)	(600)	80	800
High Rate Flat Tax	19%		NA	NA	20%	20	(10)	0	(300)	(500)	130	800
Sliding Scale	Tax Table	5 Yr Holiday	NA	NA	20%	130	40	40	20	(400)	180	1,100