SB

2001

(FILE 23)

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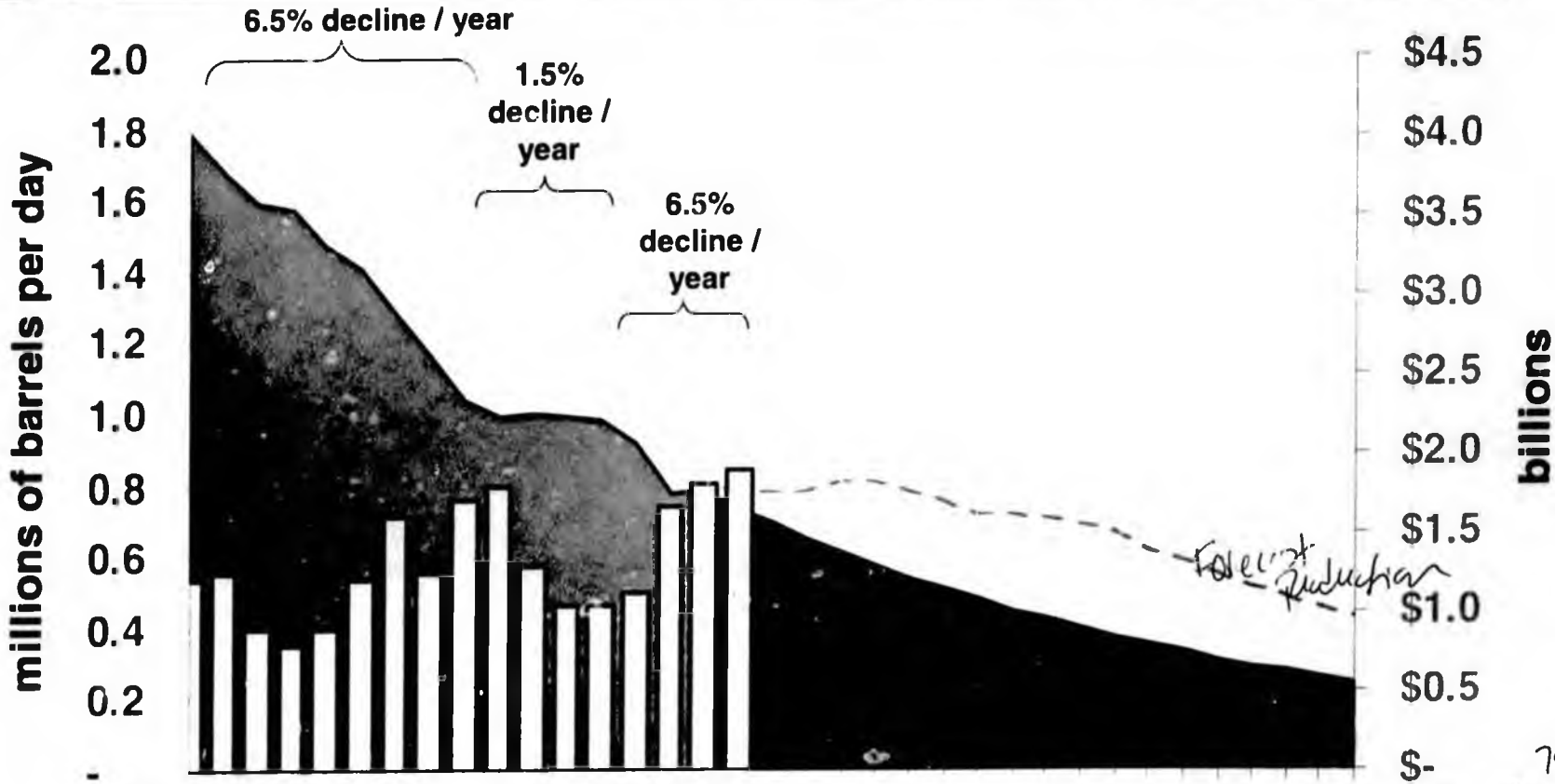
BP Presentation on SB 2001
Senate Resource Committee

Claire Fitzpatrick and Mike Utsler
October 24, 2007

Key Messages

- **Production**, not tax rate, is the major factor in determining state revenue for the future years
- Delivering the State's production forecast will require tens of billions of **investment**
- **Investment decisions** are made on the **combination** of strategy, resource prospects, technology, economics including **fiscal policy**, and risk.
- The proposed bill significantly **deteriorates economics on 70%** of investment options in the next 20 years
- Higher prices and developing technology could give the Alaska fields a new lease on life, but huge **investments are needed**

The State's production and revenue forecast counts on higher than historical investment

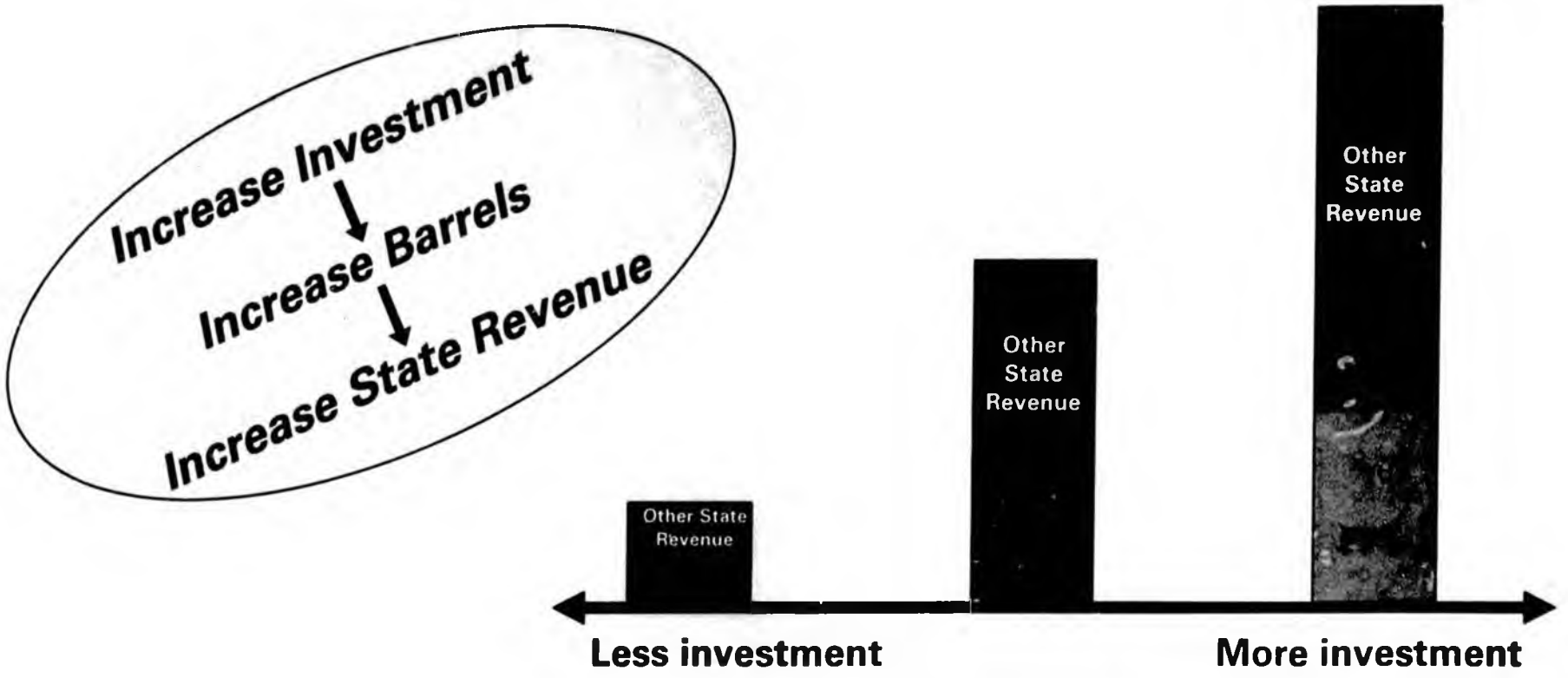


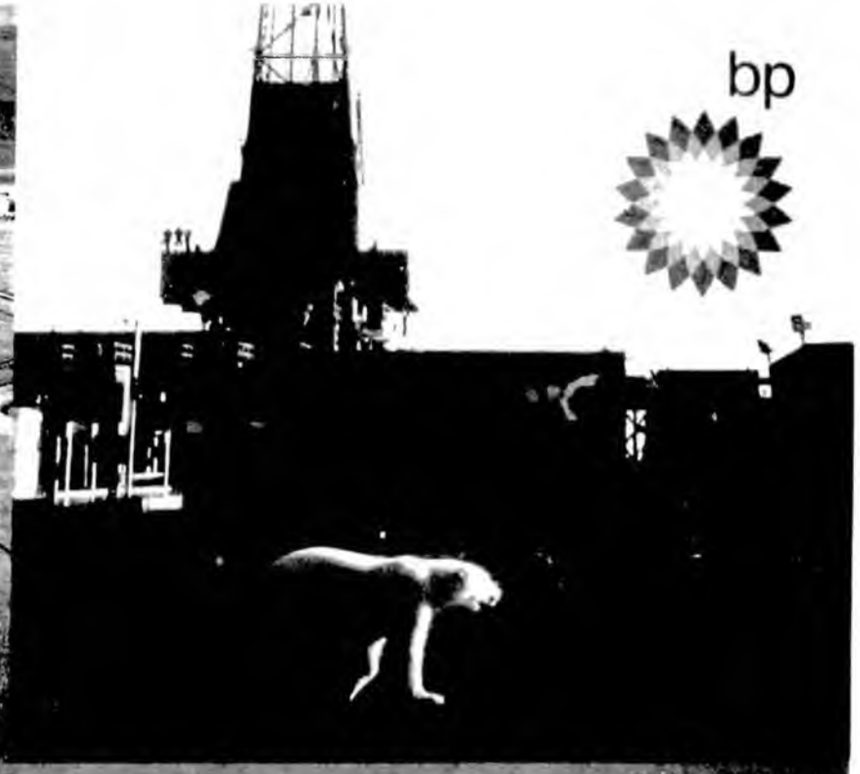
- Spring 2007 DOR Forecast
- Actual Production
- 6% Production Decline starting 2008
- Capital Spend Estimate, $billion

- total 800 wells drilled in last 10 yrs in Prudhoe

Production Drives Revenue

Decline Rate	15%	**6%**	3%
Produced Barrels	1.3 bn	3.9 bn	7.5 bn
Industry Investment	$5 bn	$25 bn	$70 bn
		Status quo	





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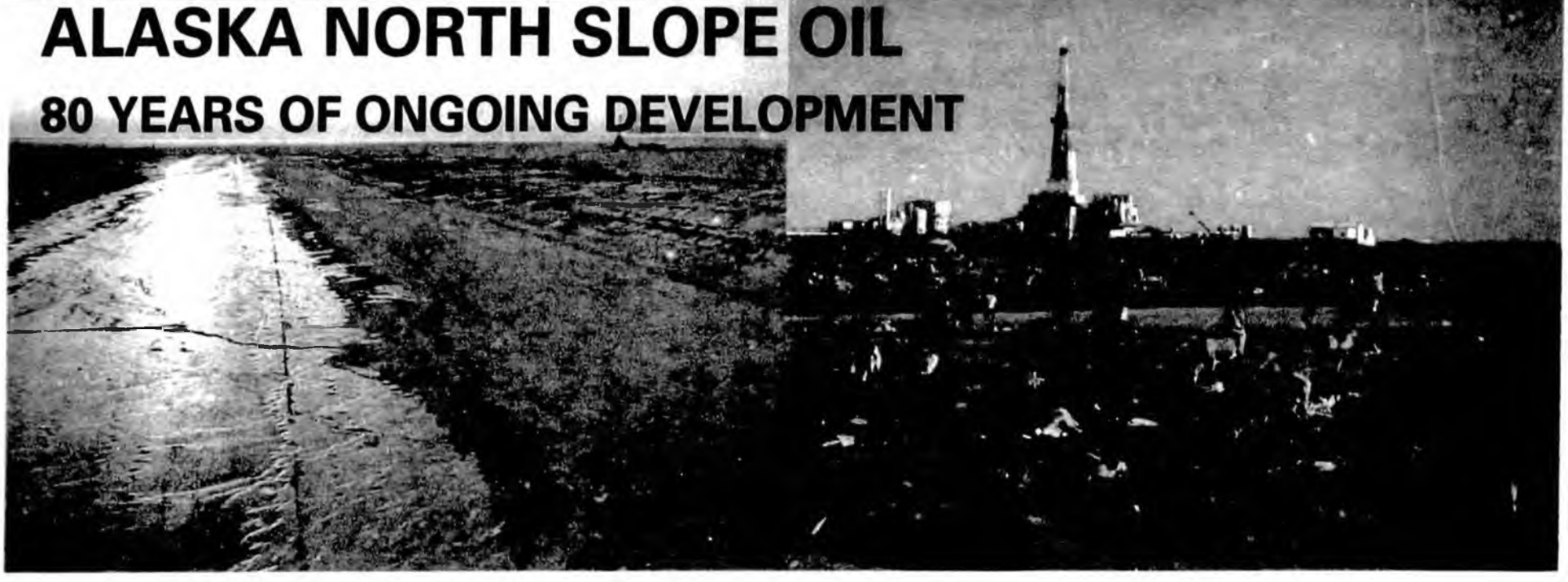
ALASKA NORTH SLOPE OIL

80 YEARS OF ONGOING DEVELOPMENT



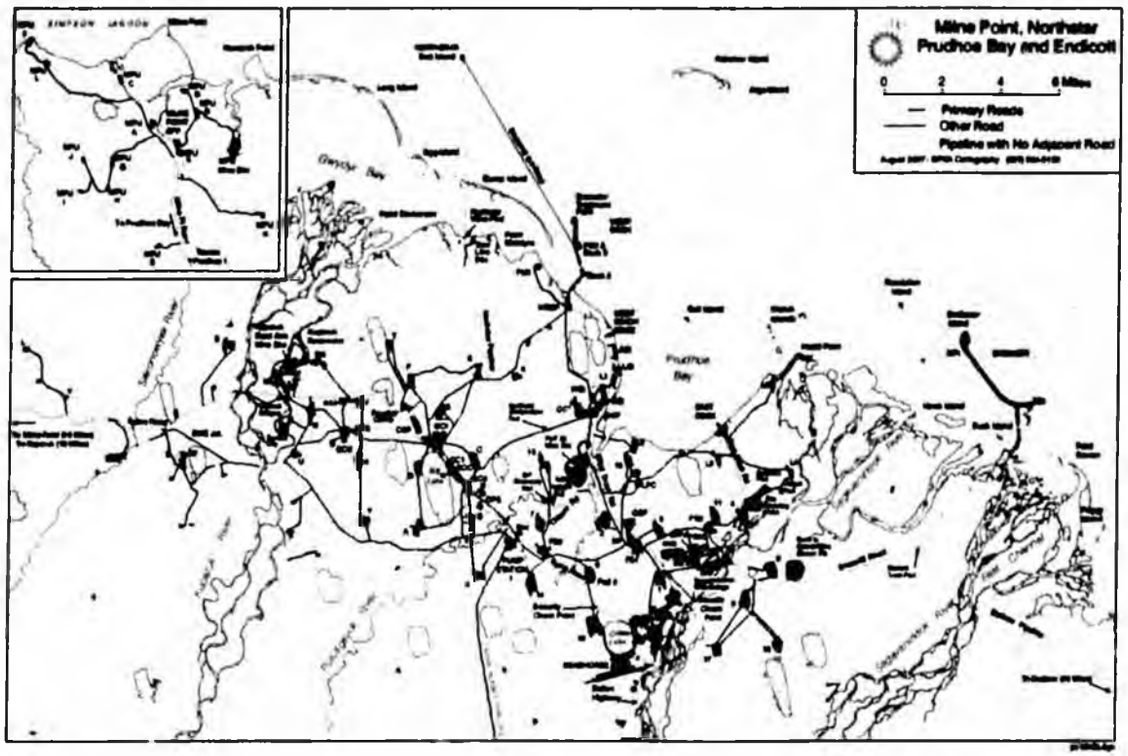
Prudhoe Bay

2500 holes drilled. 1200 active.

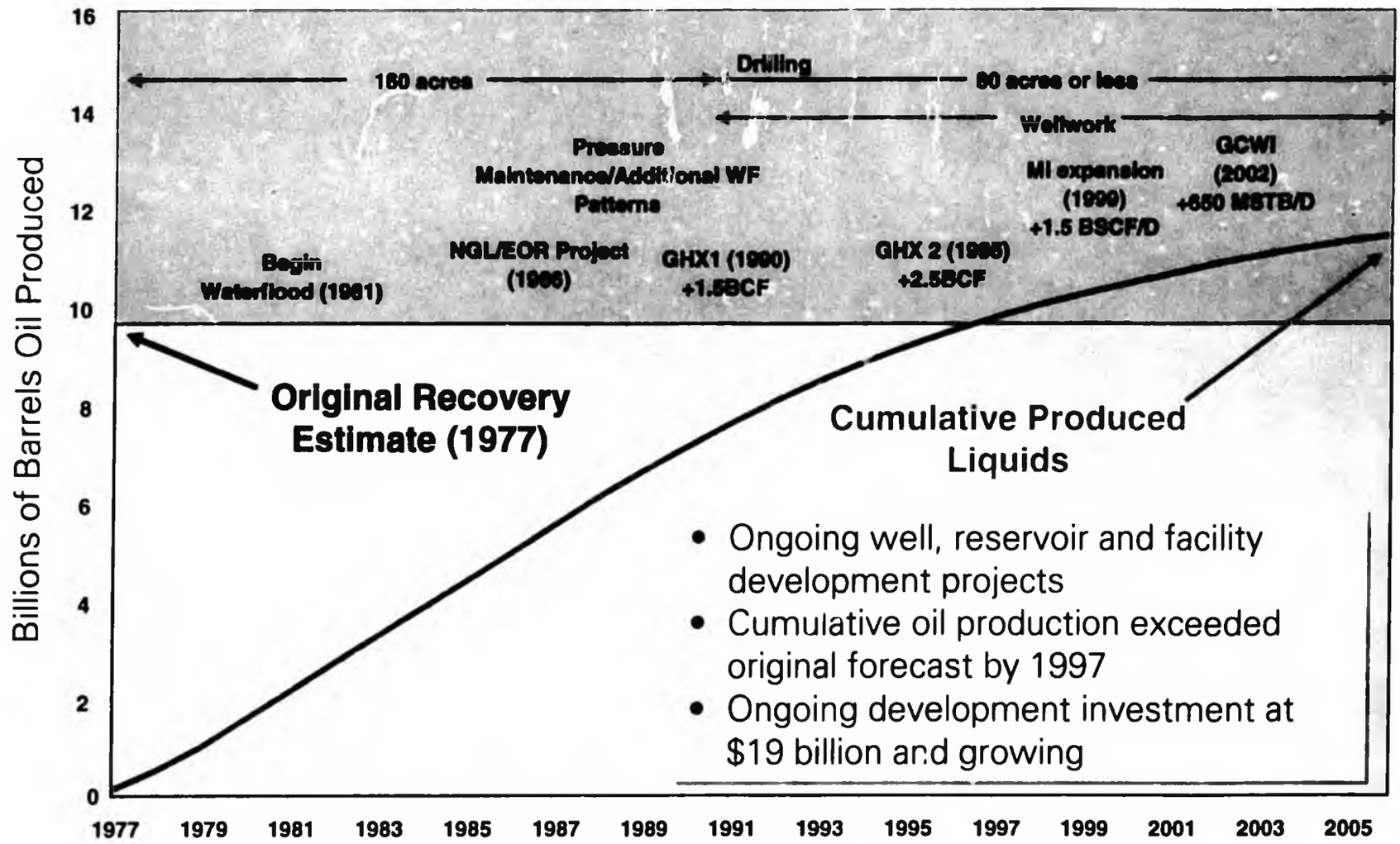
- Largest Oil Field in North America

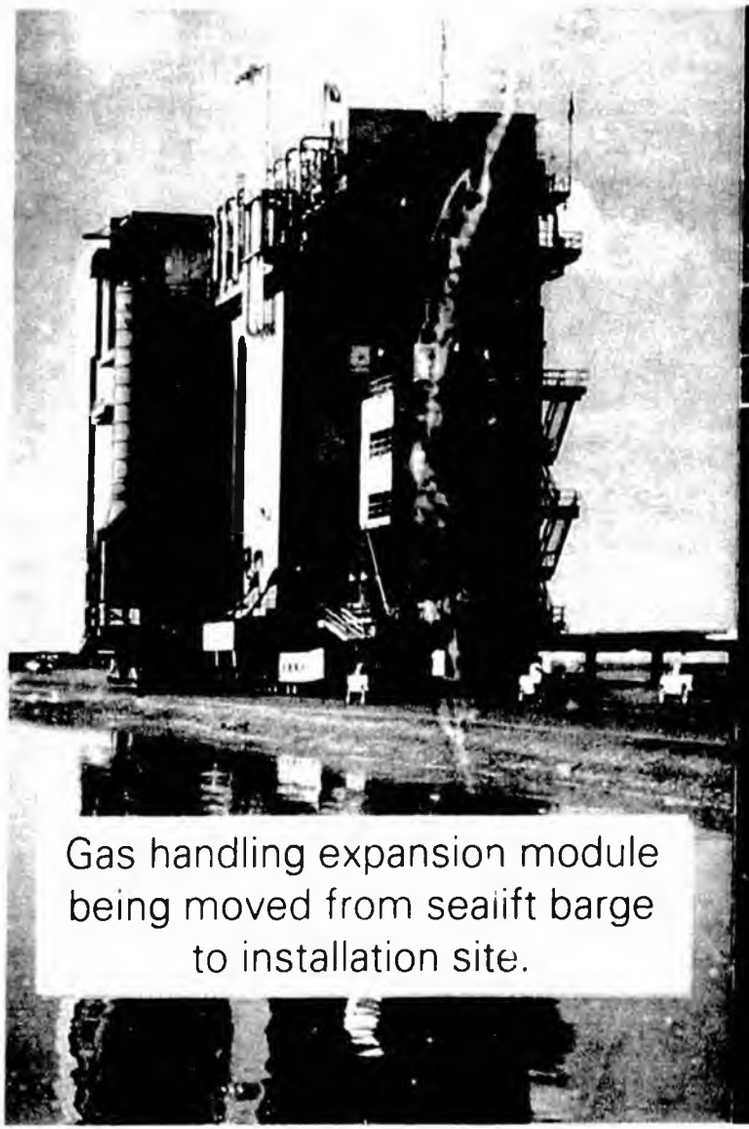
1 in 10 wells is a good success rate in exploration.
80% success rate in Prudhoe infield drilling

- Extensive and successful development
  - 60 square miles
  - 11 major facility locations
  - 42 Drill sites
  - 1200 active wells
- Future challenges
  - Managing declining oil rate, and increasing water and gas rates
  - Ongoing developments, light and heavy oil, to offset steep natural decline
- Technology development and deployment is key
  - Arctic specific
  - Advanced reservoir processes
  - World class drilling and workover
  - Facility upgrades

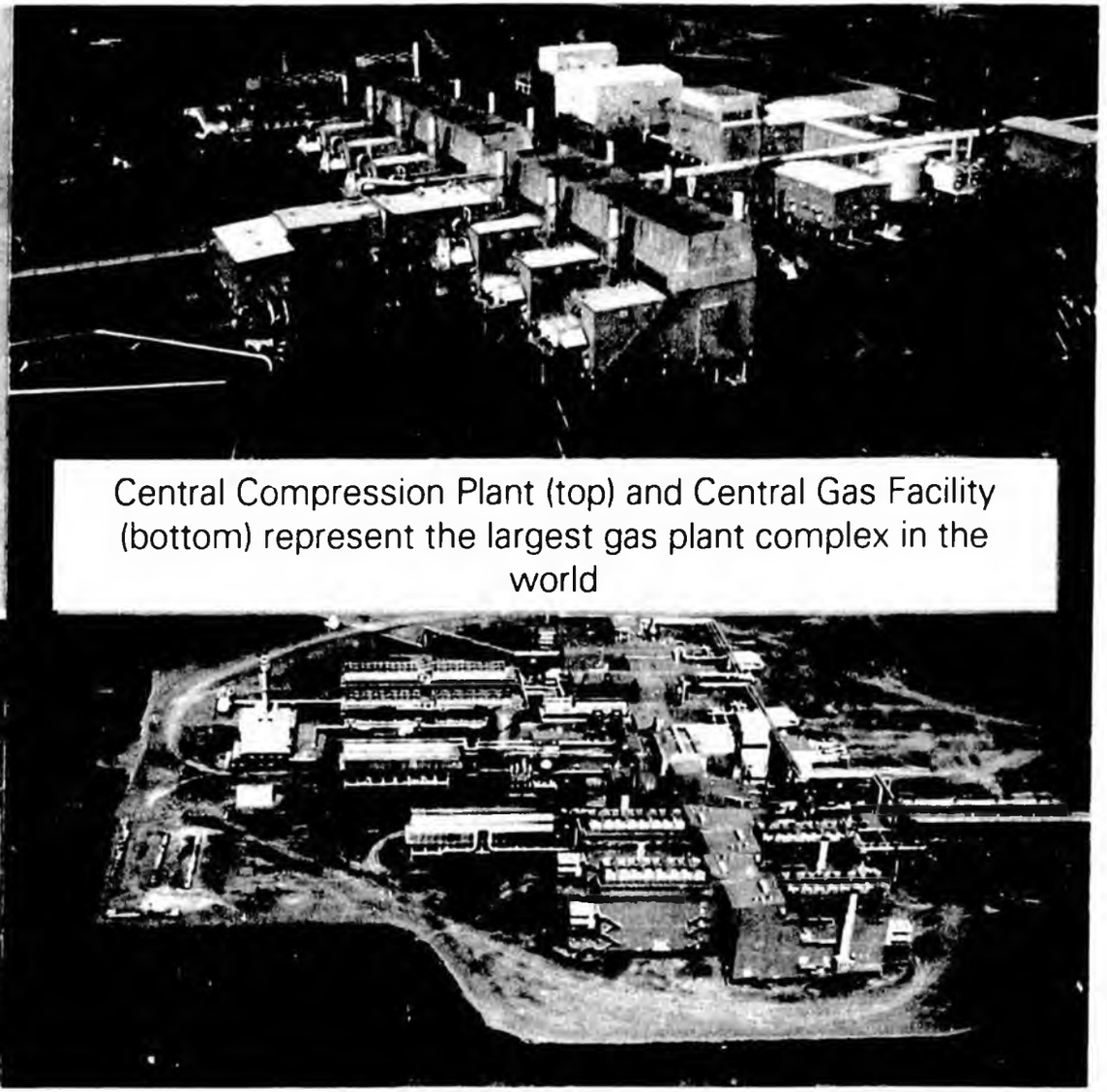


Prudhoe Bay Development History

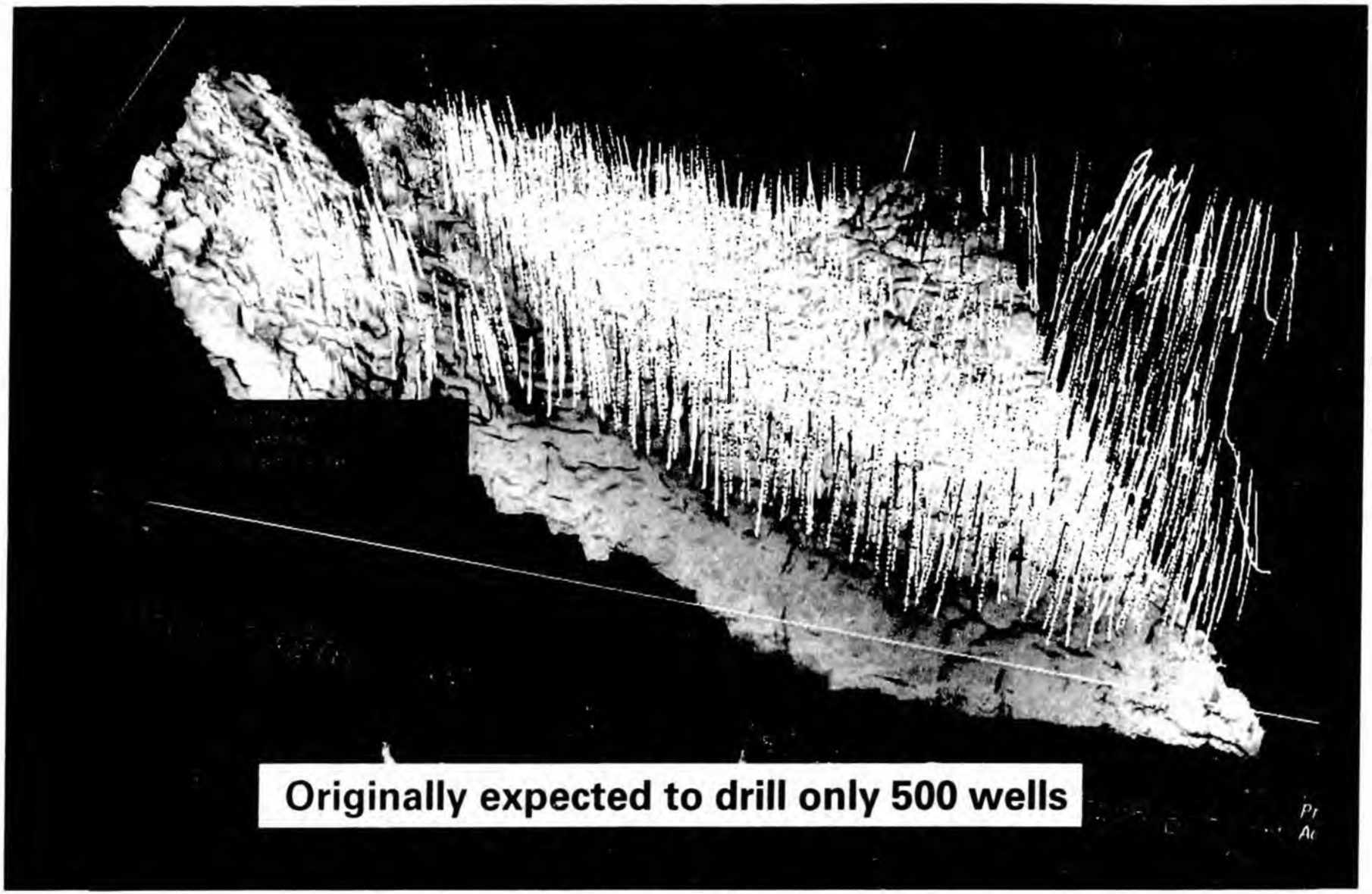




Gas handling expansion module being moved from sealift barge to installation site.



Central Compression Plant (top) and Central Gas Facility (bottom) represent the largest gas plant complex in the world


Originally expected to drill only 500 wells

Water Injection Projects

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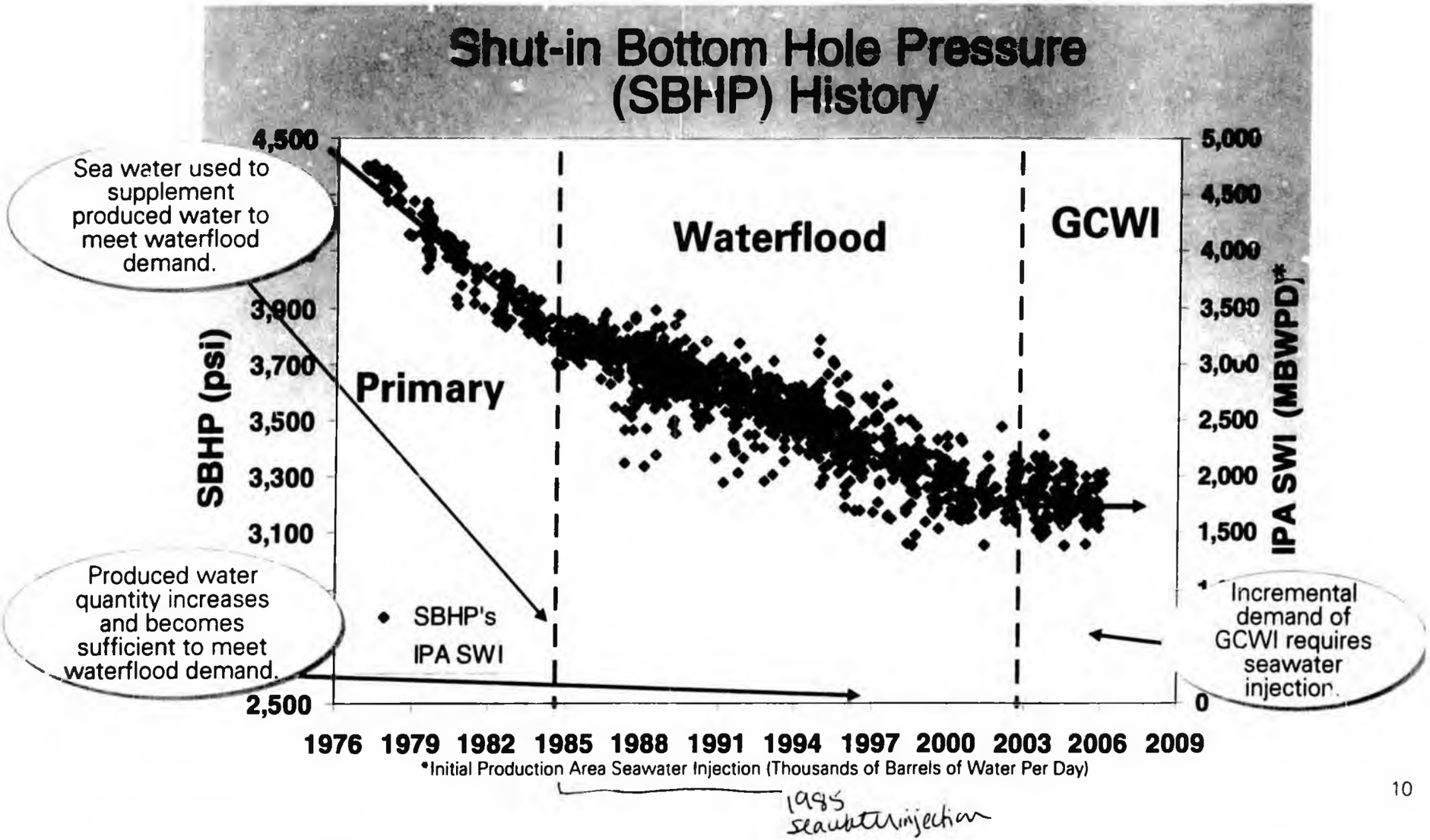
Water injection into the oil reservoir (i.e., waterflood) to maintain field pressure followed by new Gas Cap Water Injection (GCWI) technology



Projects: Bright Water ™

Objective

- Increase Oil recovery through improved sweep efficiency
- Reduce produced water

Concept:

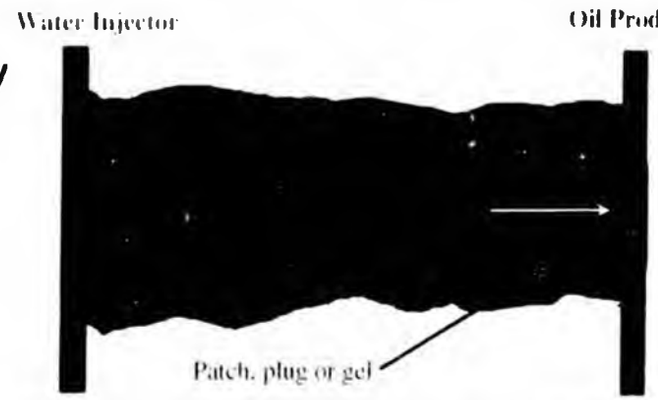
Polymer expands after deep penetration into reservoir, effectively blocking the swept zones and forcing the water into unswept oil zones. Timing for expansion and change in sweep is 9 months. Lab testing shows 2%-20% additional recovery.

2006 Highlights:

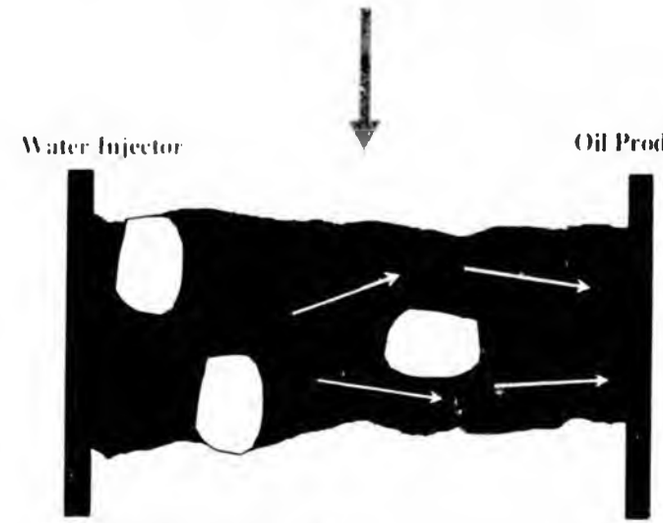
- NWFB Trial: limited response due to design and operational difficulties
- FS2 Trial: measurable response in 7 offsets

2007 Plan:

- Continued monitoring of FS2 and NWFB trials
- Pursuing additional treatments



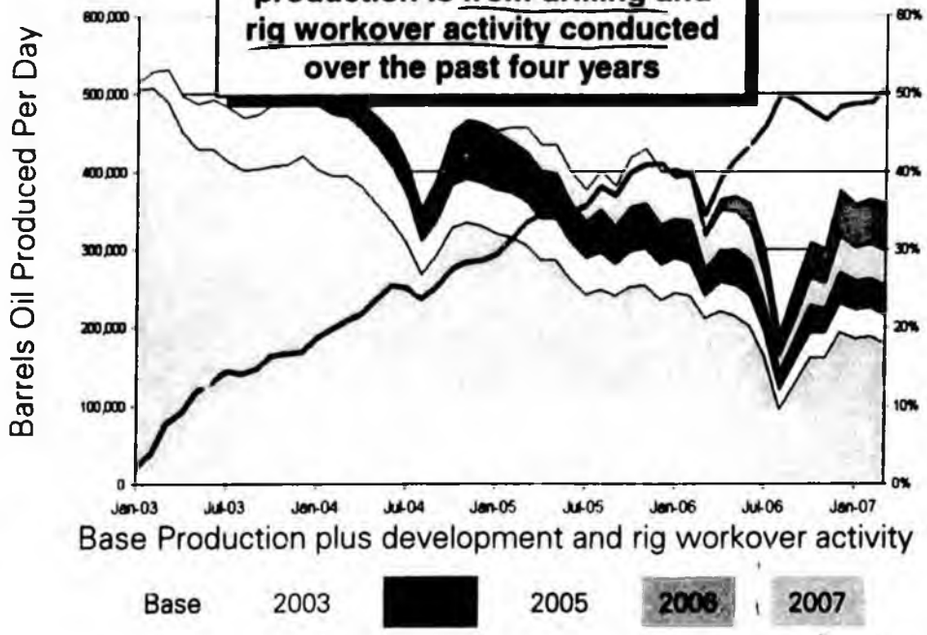
If barriers to vertical flow are partial or absent, water bypasses the block



The advantage to BW treatment is that it goes where water is going.

New Wells and Wellwork Deliver Barrels

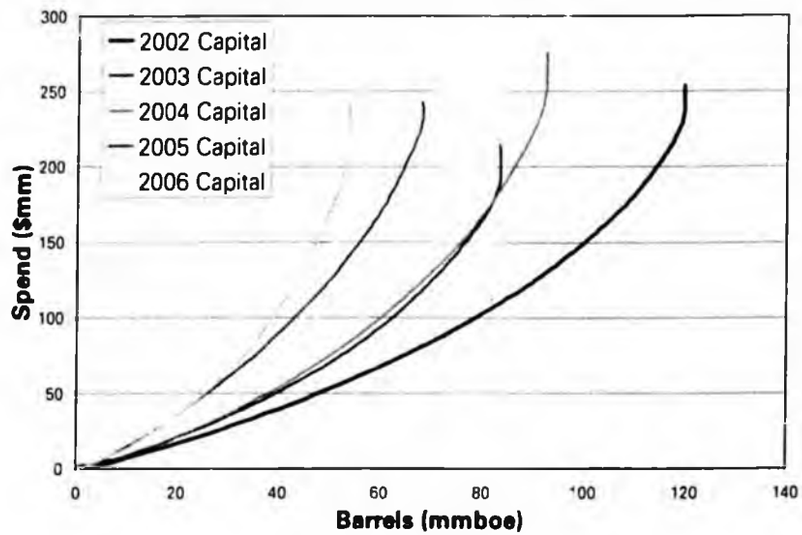
50% Of GPB's current oil production is from drilling and rig workover activity conducted over the past four years



Partial Shutdown on Prudhoe Bay

Each year, the challenge to delivering more barrels becomes greater

GPB Well Investments 2002-2006



Seismic Imaging and Directional Drilling Enable Development

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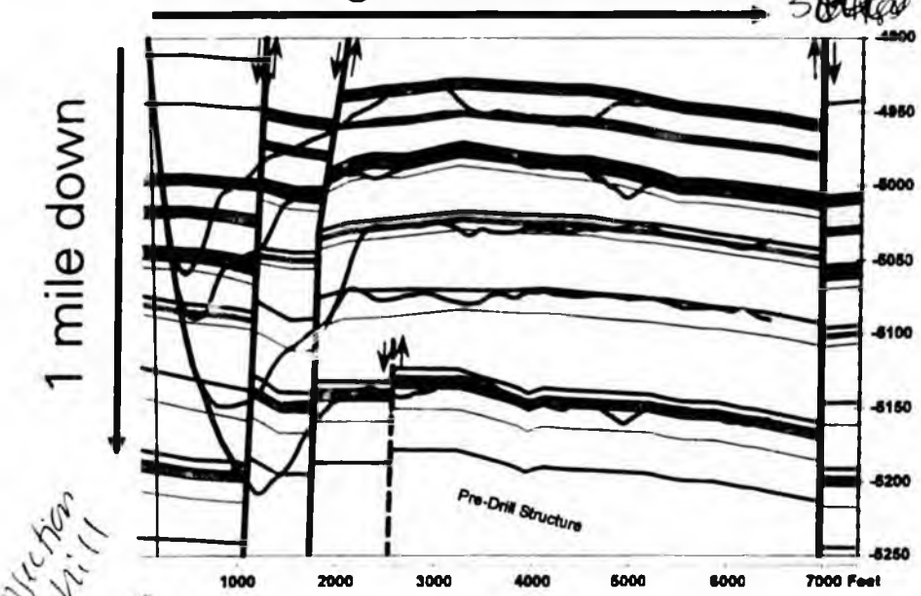
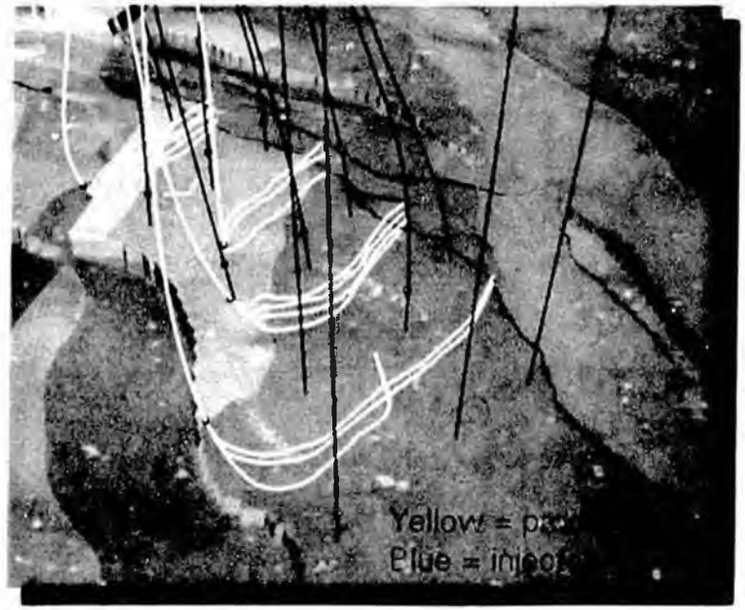


Technologies required to drill and operate these multi-lateral well did not exist eight years ago

Now 15 are producing and over 20 more are planned, but not all are approved



Western Region Prudhoe Bay

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4 new "satellite" oil pools developed since ~2000 in Western Prudhoe Bay

Milne Point

Northstar

Pt. McIntyre Niakuk

Kuparuk

Prudhoe Bay

Lisburne

Liberty

Pt. Thomson

Endicott

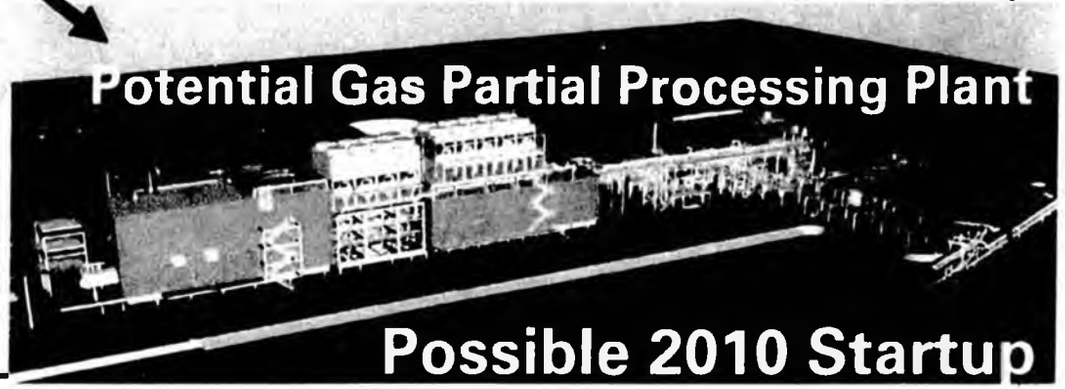
Badami

NPRA

PS1

TAPS

Western Region Development Covers Prudhoe Bay Unit West of Kuparuk River

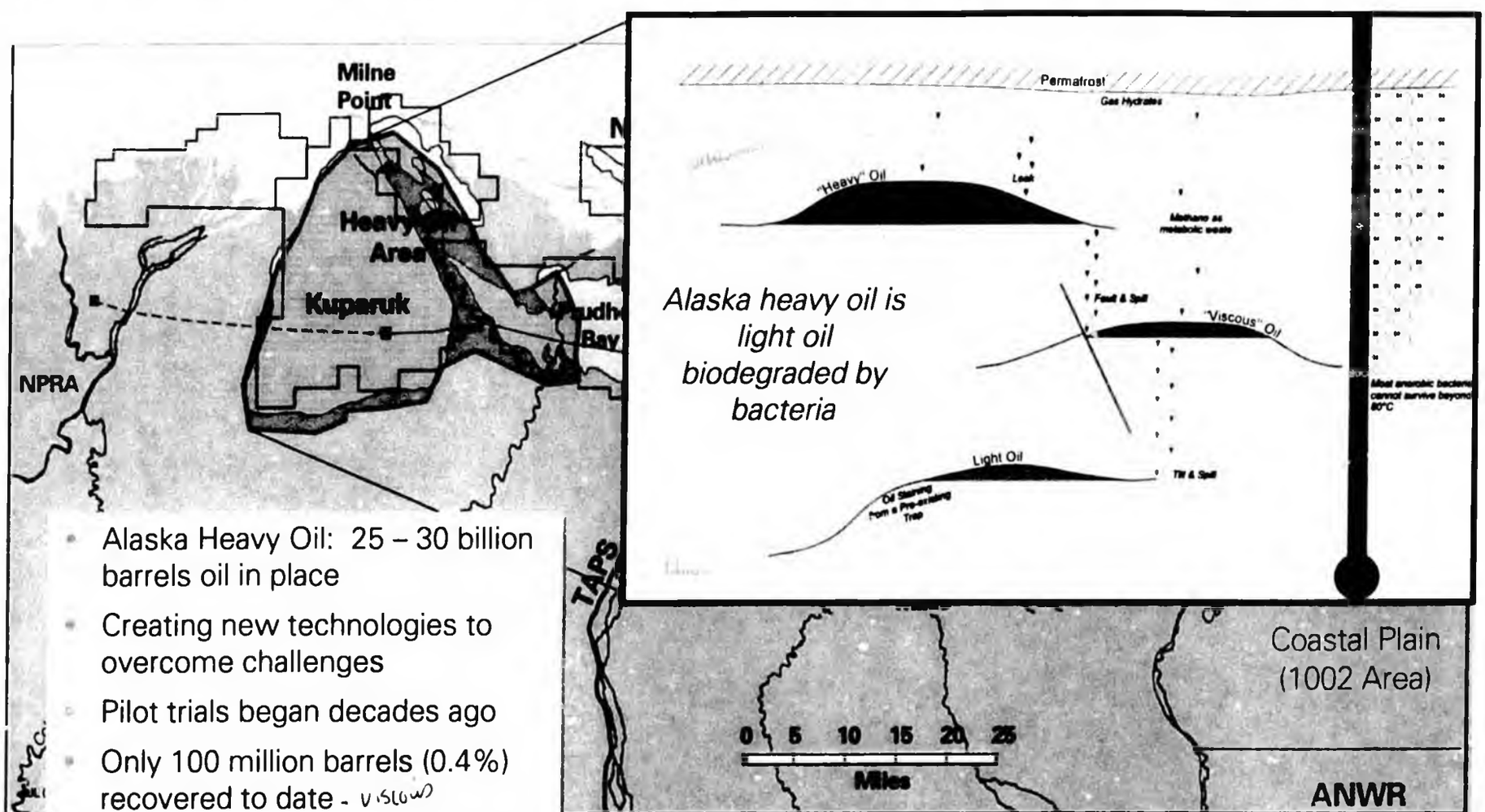


Potential Gas Partial Processing Plant

Possible 2010 Startup

LJL (April, 1997)

North Slope Heavy Oil



- Alaska Heavy Oil: 25 – 30 billion barrels oil in place
- Creating new technologies to overcome challenges
- Pilot trials began decades ago
- Only 100 million barrels (0.4%) recovered to date - viscous
- Heavy Oil Fields are within the existing oil fields

1300 to 3000 ft deep
Just below the permafrost

Heavy Oil Challenges

Heavy oil will always be disadvantaged relative to light oil on the basis of development cost and commodity price

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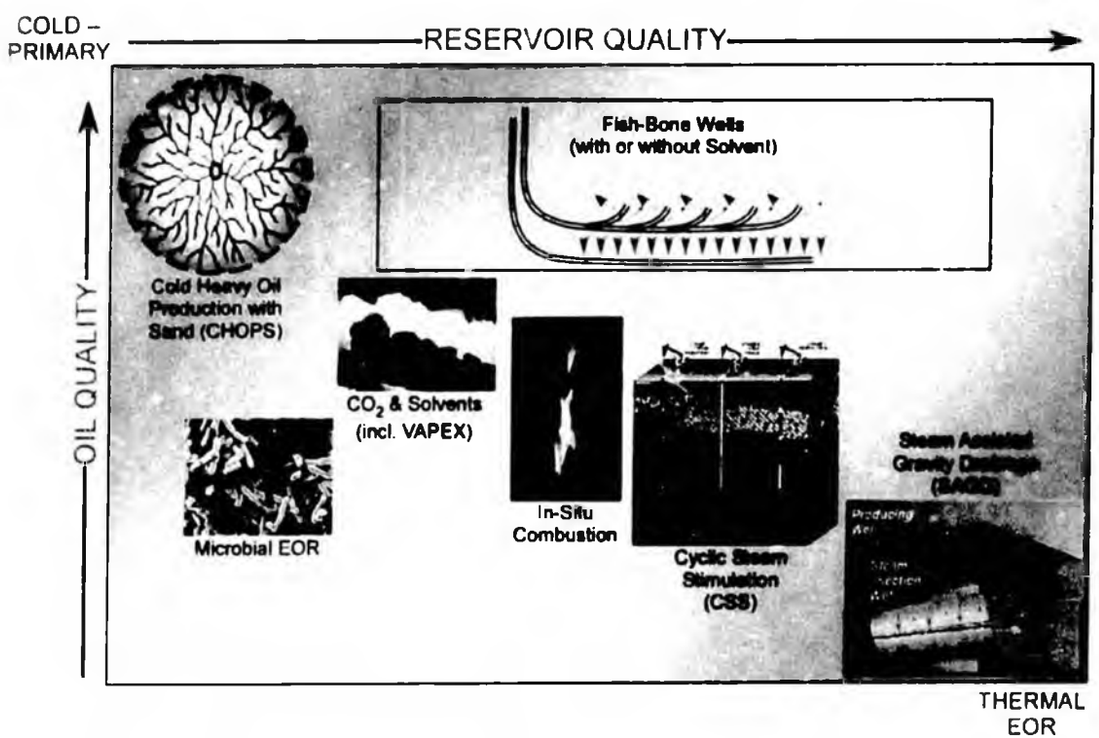
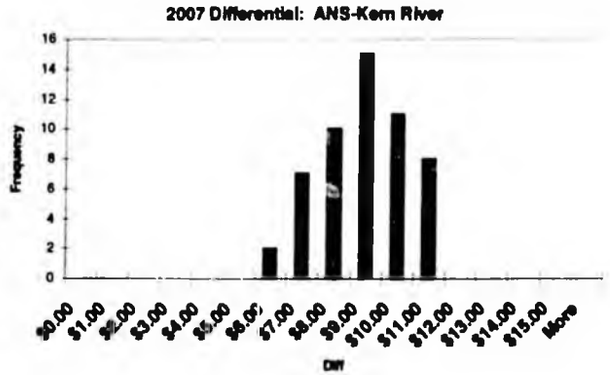
PROPERTIES		BUSINESS IMPACT		
• Chemical – Hydrogen depleted relative to light oil	=	• Retool refineries • Take a lower price on market	=	Revenue
• Physical High viscosity	=	• High well density • Add heat to reservoir & transit lines • Add diluent to major pipelines • Upgrading (partial refining) • Environmental Mitigation (e.g. CO_2 sequestration) • Water treatment • Sand Disposal • Wellwork	=	Costs

Ouch!





CHOPS
Cold Heavy Oil Production with Sand

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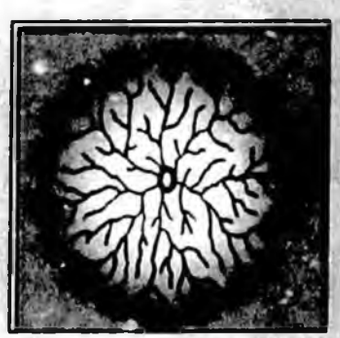
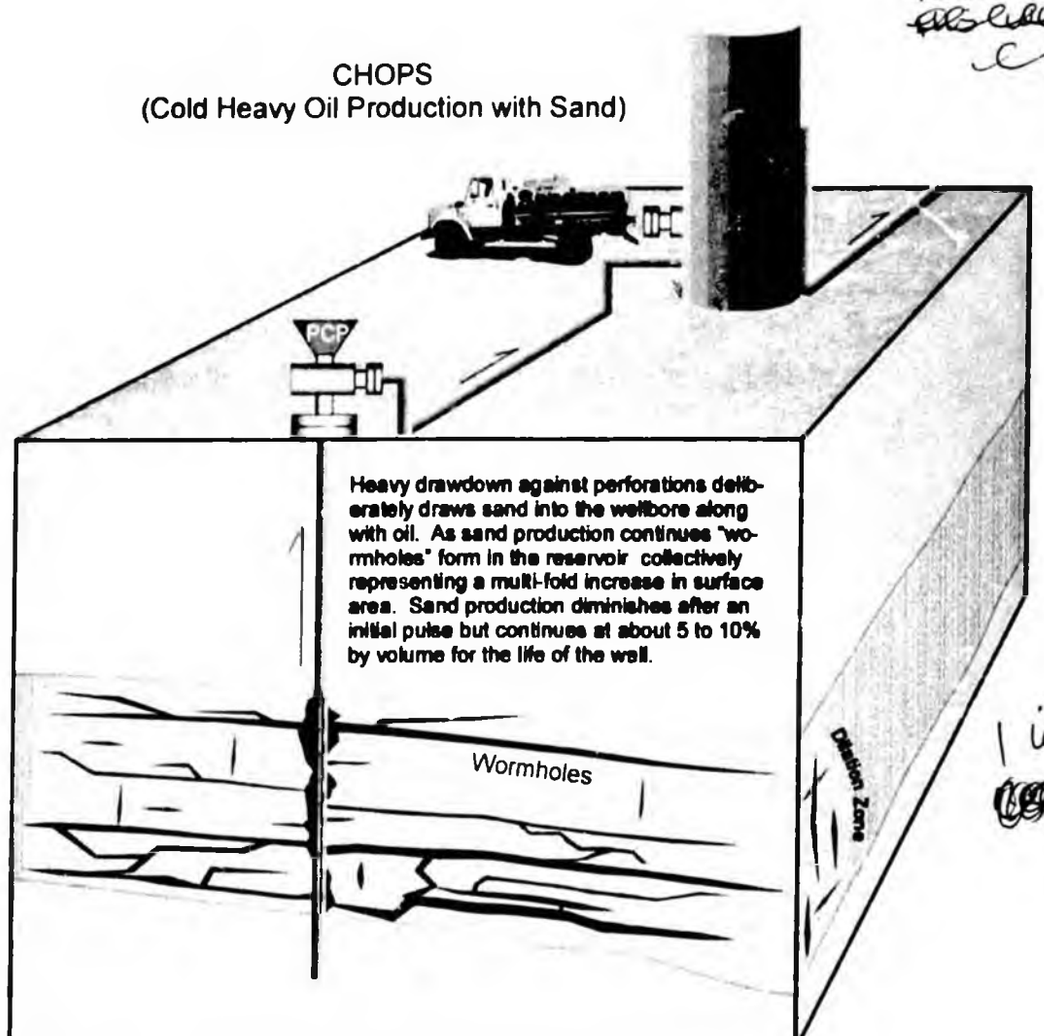
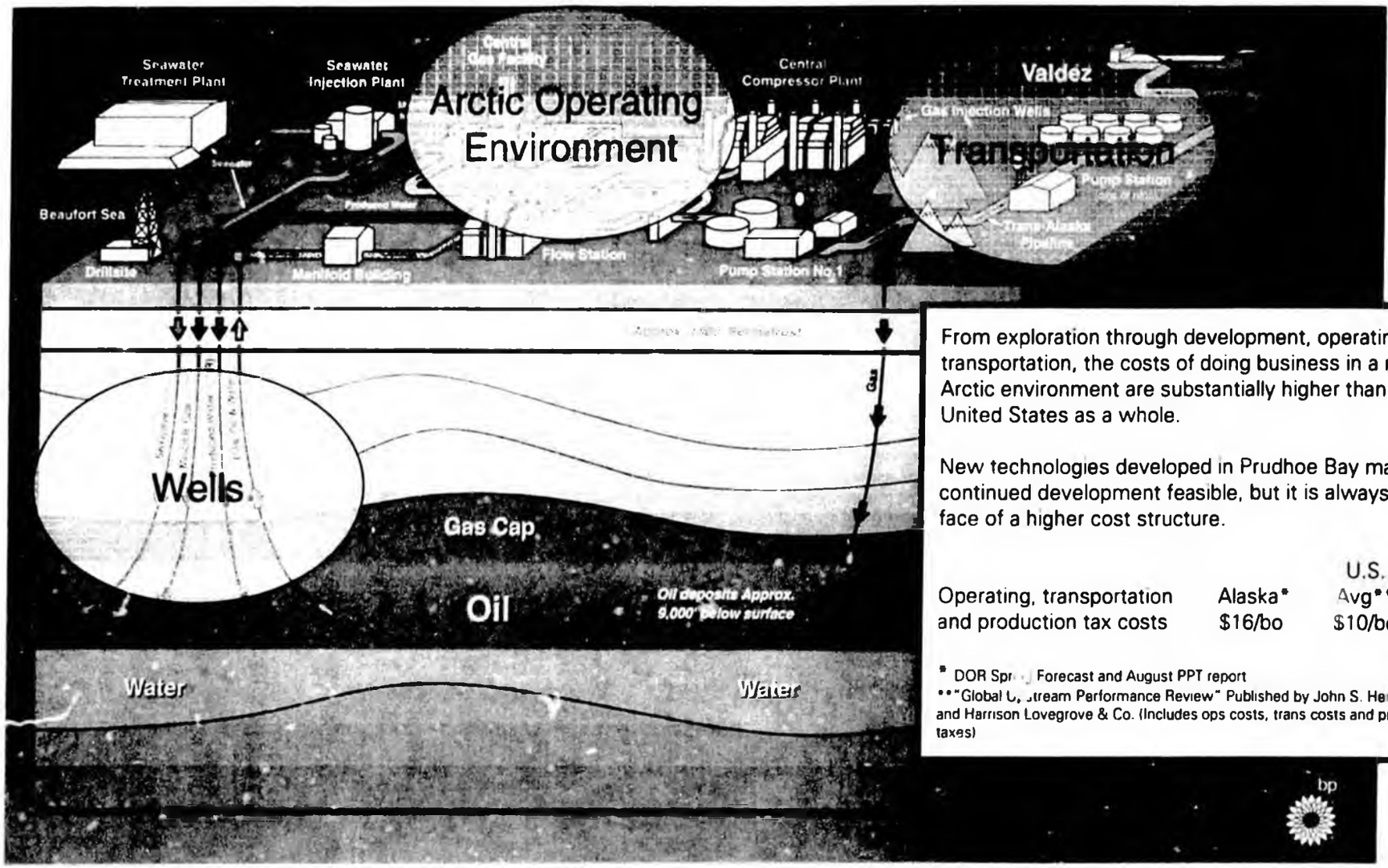
Vertical View of Reservoir



CHOPS
(Cold Heavy Oil Production with Sand)



Alaska vs. Average U.S. Cost Structure



From exploration through development, operating and transportation, the costs of doing business in a remote Arctic environment are substantially higher than the United States as a whole.

New technologies developed in Prudhoe Bay make continued development feasible, but it is always in the face of a higher cost structure.

	Alaska*	U.S. Avg**
Operating, transportation and production tax costs	$16/bo	$10/bo

* DOR Spring Forecast and August PPT report

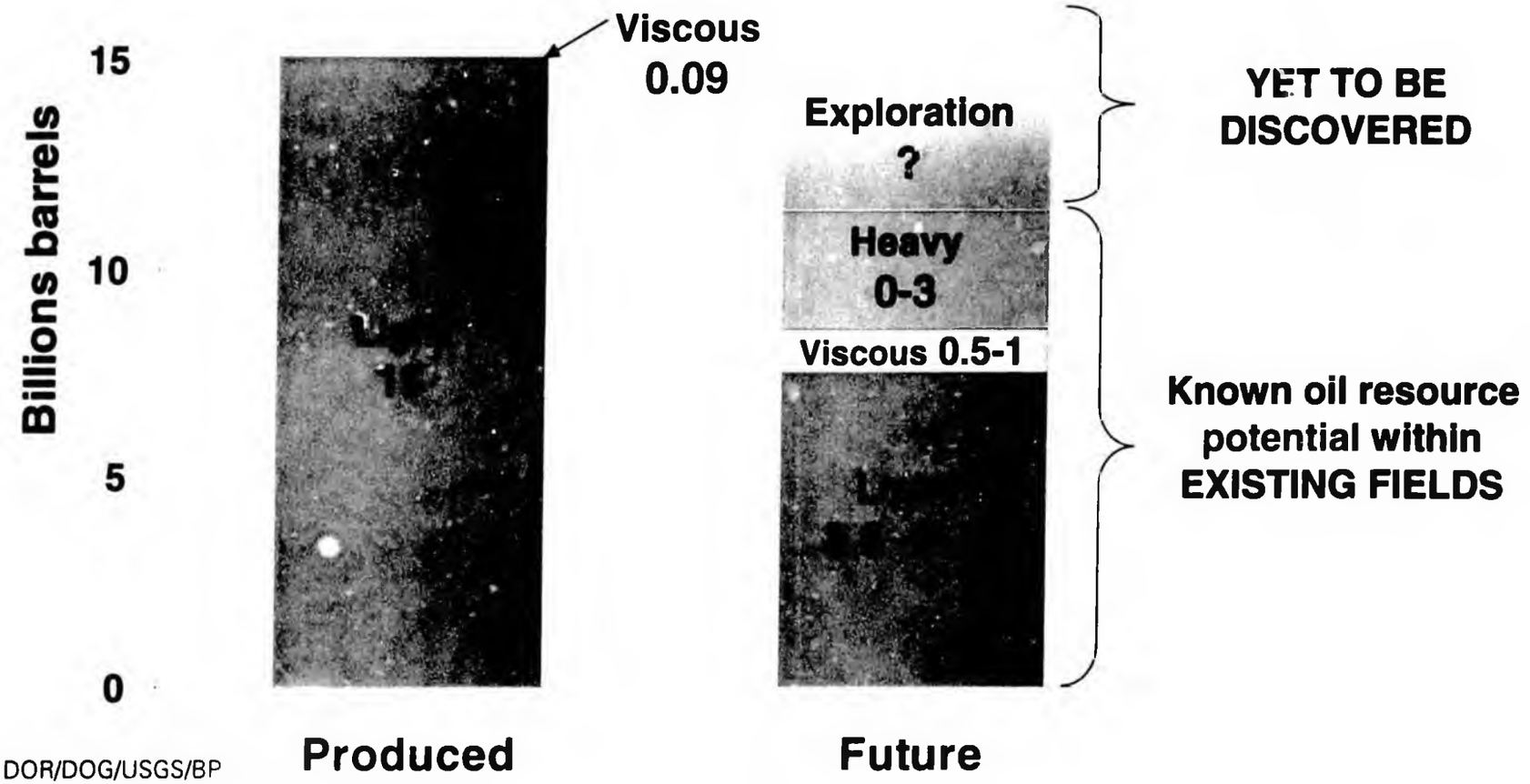
** "Global Upstream Performance Review" Published by John S. Herold, Inc and Harrison Lovegrove & Co. (Includes ops costs, trans costs and production taxes)

Prudhoe Bay Development Summary

- Technology is Critical to Optimize Recovery:
  - Developing and applying new technology at scale
  - Arctic Technology
  - Major Facility Projects
  - Advanced Reservoir Processes Technology
  - Drilling/Workover Technology
- Development has been extensive and very successful
- Oil production is mature with over 11 billion barrels recovered
  - 1200 active wells
  - Declining oil rate and increasing water and gas rates
- Ongoing Projects Are Needed to Offset Steep Natural Decline
- Prudhoe Bay has a large part of Alaska's Future Opportunities

The future of North Slope oil still tied to existing

Sustained investment in light oil development is critical to developing heavy oil and new fields



Source: DOR/DOG/USGS/BP

Future of oil production is critically dependent on existing large fields, additional investments

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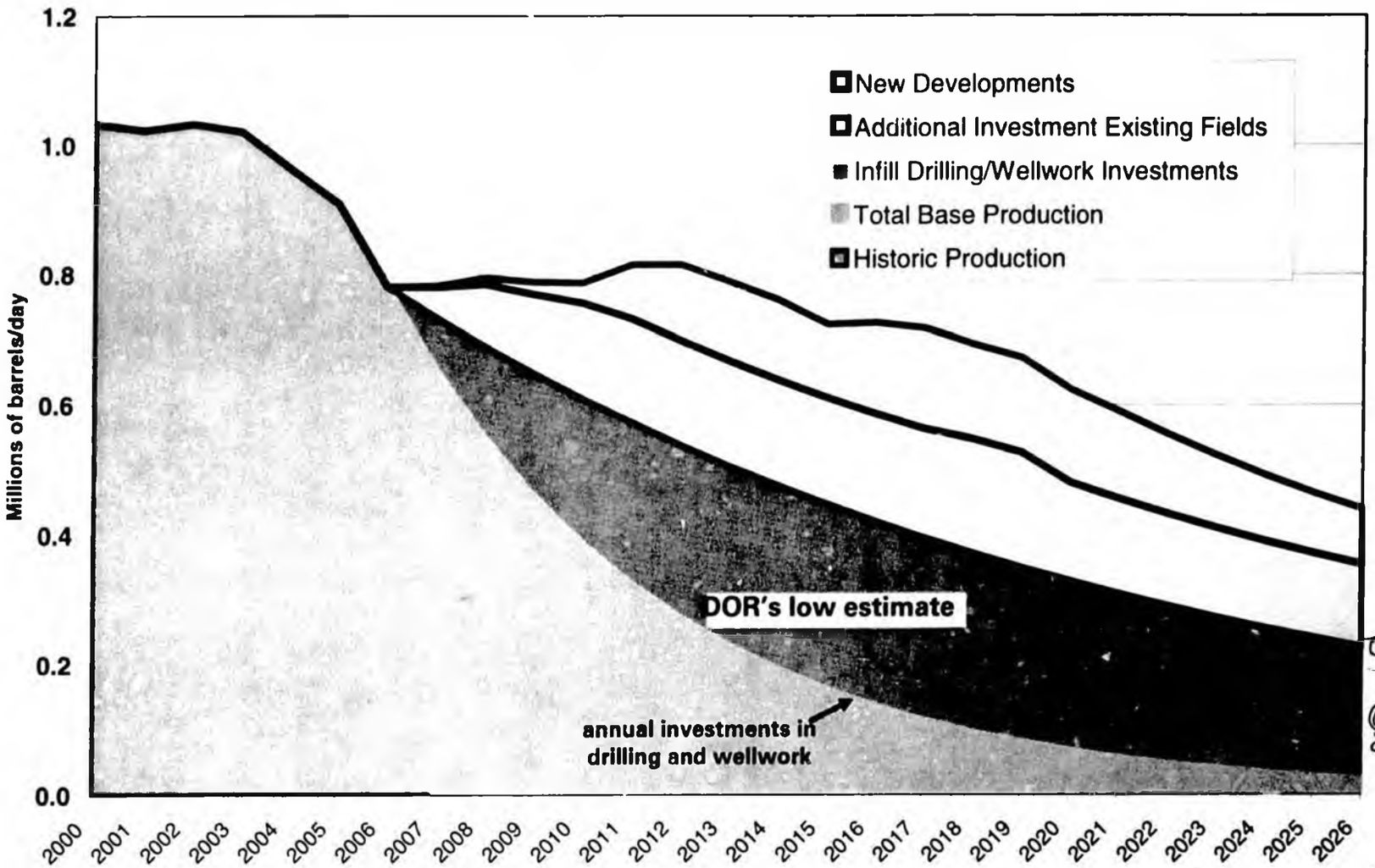
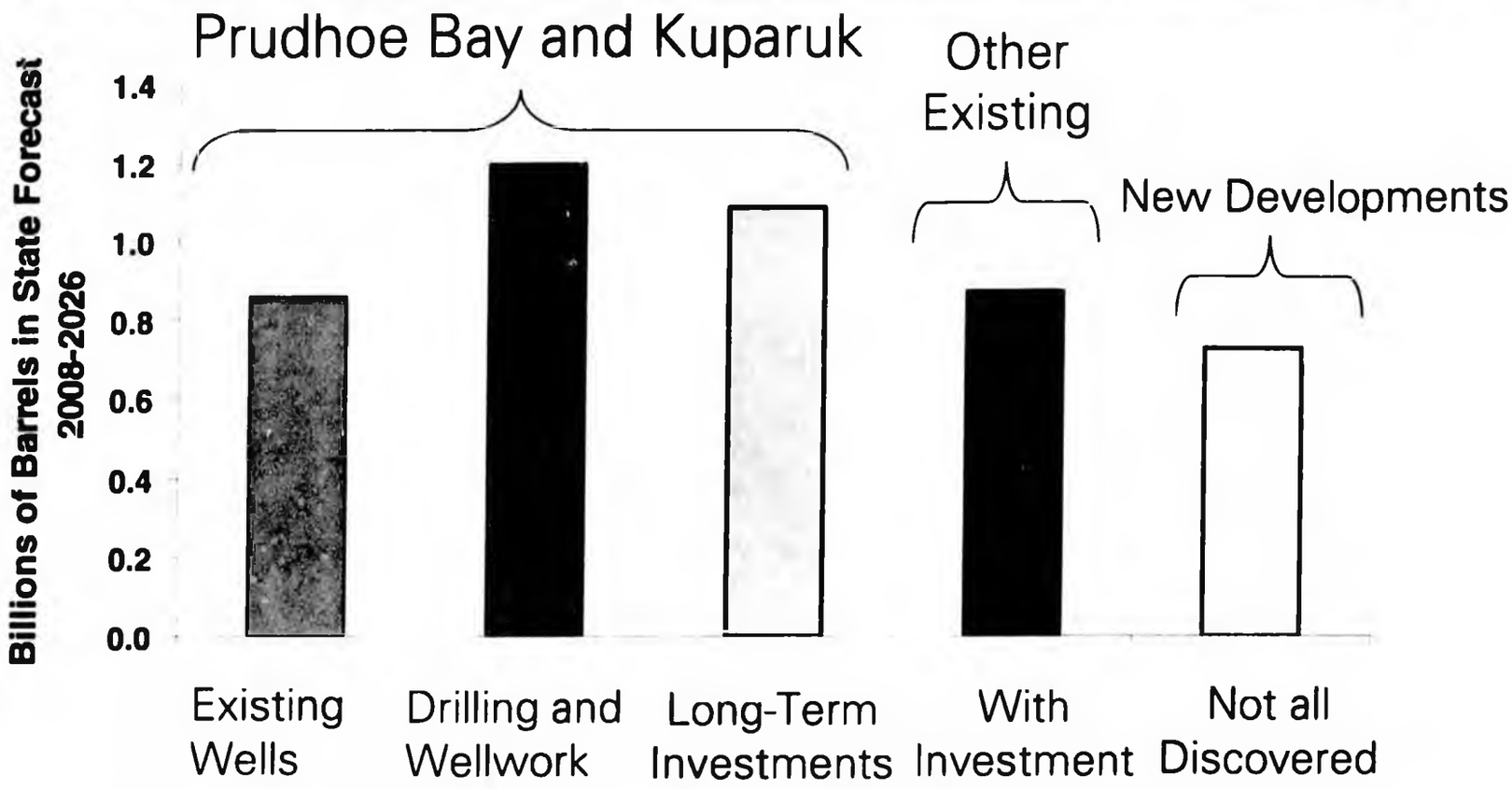
DOR Production History and Forecast



·1z heavy
·1z Light oil
6% decline

Keys { new technology
new investments

Alaska needs a world scale level of ALL types of investment to sustain the future of oil production



State Revenue, $billion*	13	18	16	11	9

*assuming PPT terms and state revenue of $15/bbl at $60/bbl ANS

Sector inflation triggered by high oil prices is real and substantial – example measures

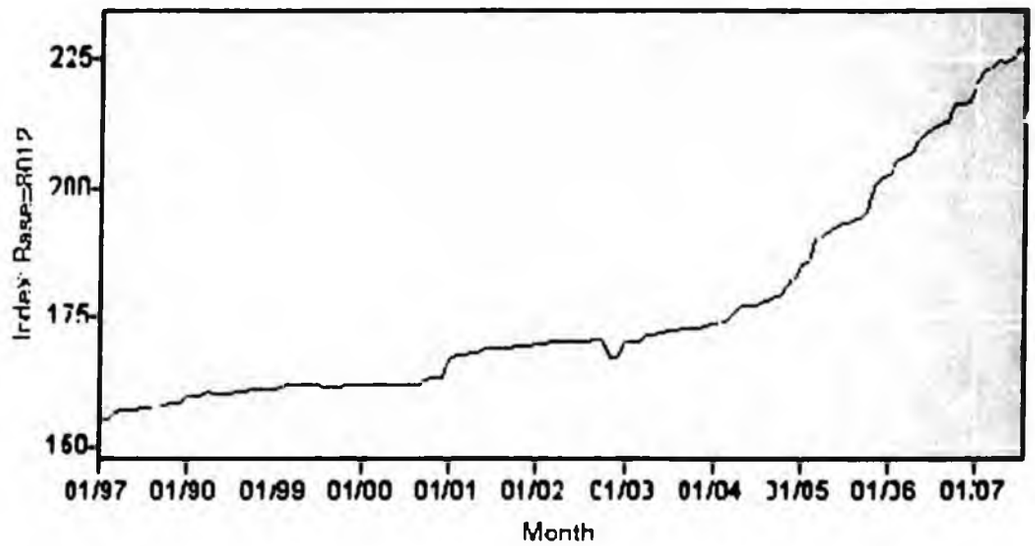
"The Upstream Capital Costs Index, developed by Cambridge Energy Research Associates (CERA), shows that costs for oil and gas production equipment, facilities, construction, materials and personnel have increased 53% since 2005." (Source: PPT Implementation Status Report, August 2007)

2004-2006 U.S. Average Cost Increases per barrel

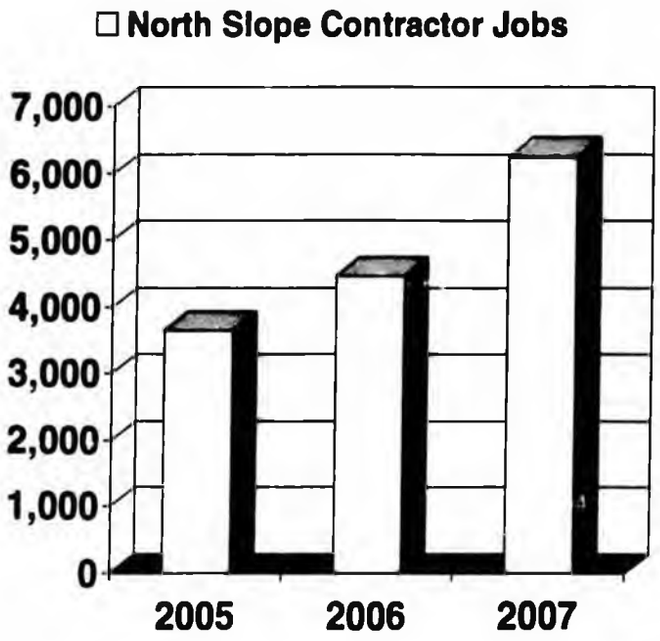
- 153% on Finding and Development costs (Capital)
- 58% Lifting costs (Expense)

(Source: "Global Upstream Performance Review" published by: John S. Herold /Harrison Lovegrove)

Oil and Gas Field Machinery and Equipment PPI
Source: U.S. Department of Labor



Investment activity is also causing a large part of the increase



- Since late 2004, BPXA staff has grown from 1300 to approaching 2000 employees
- Active drilling rig count on contract for BP has gone from 9 in 2004 to 10 in 2007
- BP commissioned a new camp this summer and rented 4 more, increasing our camp capacity by 30%
- Seismic acquisition activity brought in additional 100+ contractors to the Slope for the winter season
- Pickup truck rentals in support of NS operations has gone up approximately 60%
- Preventative maintenance and inspection programs on the 30-year old infrastructure are at an all-time high

Economic impact of proposed bill on new investments

- About 70% of future investment decisions are within Prudhoe Bay and Kuparuk
- Minimum tax imposed on these fields causes a progressive deterioration of economics at medium to low prices
- A significant number of investment opportunities in Prudhoe Bay and Kuparuk will cross into marginal or non-economic territory, raising costs and lowering netbacks for the rest of the North slope production.

Key Messages

- Production, not tax rate, is the major factor in determining state revenue for the future years
- Delivering the production forecast will require tens of billions of investment
- Investment decisions are made on the basis of strategy, resources, technology, economics, and risk, including fiscal stability
- SB/HB2001 significantly deteriorates economics on 70% of investment options in the next 20 years
- Higher prices and developing technology could give the Alaska fields a new lease on life, but huge investments are needed
- The focus of the tax policy should be on encouraging large investments in existing fields as well as exploration
- The proposed bill creates **uncertainty** for taxpayers and potentially distorts business decision making

The time to influence the future outcome for the state is now