

ALASKA LEGISLATURE SPECIAL COMMITTEE/SUBJECT FILE 8672
1656 SCOMM 63: INT'L OIL TAX COMPARISON STUDY GROUP, 1989-1990

1224

Nancy

This is the SIXTH - and hopefully last -
draft of the agenda. Can you get
it OK'd by Sen. Johnson by close
of biz today so I can get the
letters out tonight.

Stx,
Billy

Alaska State Legislature

Senate Resources Committee

Senator Bettye Fahrenkamp, Chairman
Senator Jay Kerttula, Vice Chairman
Senator Dick Eliason
Senator Steve Frank
Senator Rick Halford
Senator Arliss Sturgulewski
Senator Fred Zharoff



P.O. Box V
Juneau, Alaska 99811
(907) 465-4907

To: Senator Tim Kelly
Senate President

From: Senator Bettye Fahrenkamp, Chairman
International Tax Comparison Group

Date: February 27, 1990

Re: Request for authorization to cover dinner expenses

OK Kelly 3/12/90

Three international oil consultants retained by the International Tax Comparison Group to provide analysis and a report to the group will be in Juneau on March 19 - 21. They will be presenting their final report to the legislature before a joint House and Senate Finance and Resources Committee meeting on Tuesday, March 20.

I would like to host a dinner for the consultants for group members and oil industry representatives at the Summit Inn restaurant. The estimated cost of the dinner is \$700 for 20 attendees. Please accept this as a request for authorization for dinner expenses on March 19.

I have made an effort to be certain that oil industry representatives have an opportunity to meet with the consultants and believe this would afford members, consultants and oil industry representatives an informal setting to foster improved dialogue between these groups.

miles...2/26...THIRD draft agenda for consultants

for
2389

INTERNATIONAL TAX COMPARISON GROUP

SUNDAY, MARCH 18 (Comm. Malone. Jim Rhode informal dinner)

MONDAY, MARCH 19

9:00-11:00---Part One...Presentation by consultants to ITC Group...Speaker's Chambers (Billy)

11:00-12:00 House and Senate floor sessions (Jerry, Nancy.)

LUNCH---(tentative) With Governor, at Mansion (Jim Rhode.)

1:30-3:30---Part Two...Presentation by consultants to ITC Group...Speaker's Chambers (Nancy)

3:30-5:30---Presentaion to 'Other' Administration officials...Governor's Conference Room (Jim Rhode.)

6:30---DINNER Hosted by Sen. Fahrenkamp--^{Summit}Baranof (Nancy)
Guests: Nine committee members, Consultants, B. Wade and John Roots of Arco; Julian Darley and Jim Palmer of BP; Dave Parrish and Ken Rather of Exxon (Tally contact.)(Billy draft invitation to Tally.)

-16- summit

TUESDAY, MARCH 20

8:30-10:00---Presentation to House and Senate Finance and Resources Committees in House Finance (Senate Finance?)(Tally and Nancy.)

11:00-12:00---OPEN

12:00-1:30---LUNCH...Brown Bag lunch for staffers and legislators in Speaker's Chambers...general Q and A (Billy)

1:30-3:00---~~(Press Conference)~~ Speaker's Chambers ~~(Billy)~~

Industry oil

3:00-5:00---OPEN

6:30---DINNER...Commissioner Malone to host Administration dinner at Baranof .(Jim Rhode to handle.)

WEDNESDAY, MARCH 21

9:00-12:00--Meeting with Oil Industry staff

12:00-1:30--LUNCH...Open

1:30--AFTERNOON OPEN

draft letter by Cotten, Fahrenkamp to oil industry dinner guests...Darley,
Palmer of BP; Parrish, Rather of Exxon; Wade and Roots of Arco

Dear _____:

On behalf of the International Tax Comparison Group, we would like you to join
the Group for dinner at the Baranof Hotel on Monday, March 19, 1990, at 6:30
p.m. at the Baranof Hotel.

The purpose of the dinner will be to share opinions with our consultants on
the tax comparison work to date.

We hope you will be able to join us.

Sincerely yours,

Sam Cotten, Representative
Co-Chair, ITC Group

Bettye Fahrenkamp, Senator
Co-Chair, ITC Group

miles...3/5...FOURTH draft agenda for consultants

INTERNATIONAL TAX COMPARISON GROUP

SUNDAY, MARCH 18--Commissioner Malone, Jim Rhode dinner (Jim)

MONDAY, MARCH 19

9:00-11:00---Part One...Presentation by consultants to ITC Group...Speaker's Chambers (Billy)

11:00-12:00 House and Senate floor sessions (Jerry)

LUNCH---OPEN

1:30-3:30---Part Two...Presentation by consultants to ITC Group...Speaker's Chambers (Nancy)

3:30-5:30---Presentaion to 'Other' Administration officials...Governor's Conference Room (~~Jim~~) *Steve Cole*

7:00---DINNER...Hosted by Sen. Fahrenkamp--Summit (Nancy)

Guests: Nine committee members; Consultants; B. Wade and John Roots of Arco; Julian Darley and Jim Palmer of BP; Dave Parrish and Ken Rather of Exxon (Tally gets list to Billy. Billy prepares letters for Rep. Cotten and Sen. Fahrenkamp signatures)

TUESDAY, MARCH 20

H-7 in *H/Sen Res + H/7 in*
8:30-10:00---Presentation to House and Senate Finance and Resources Committees in Senate Finance (Tally)

11:00-12:00---OPEN

12:00-1:30---LUNCH...Brown Bag lunch for staffers and legislators in Speaker's Chambers...general Q and A (Billy)

1:30-5:00---Meeting with Oil Industry staff in Speaker's Chambers (Billy)

6:30---DINNER...OPEN

WEDNESDAY, MARCH 21

9-10

9:00-12:00---OPEN

mon *S/7 in*
12:00-1:30---LUNCH...(tentative) Governor's Mansion, for Mary Halloran and Consultants only (Jim)

1:30-5:00---OPEN



Official Business

Alaska State Legislature

P.O. Box V
State Capitol
Juneau, Alaska 99811

March 7, 1990

Julian Darley, President
BP Exploration (Alaska), Inc.
PO Box 196612
Anchorage, AK 99519-6612

Dear Mr. Darley:

On behalf of the International Tax Comparison Group, we would like you to join the Group for dinner at The Summit on Monday, March 19, 1990, at 7:00 p.m.

The purpose of the dinner will be to share opinions with our consultants on the tax comparison work to date.

On Tuesday, March 20, 1990, members of your staff are invited to attend a work session from 1:30 p.m. to 5:00 p.m. with the consultants. This will be held in the Gastineau Suite of the Baranof Hotel.

We hope you will be able to join us.

Sincerely yours,

Handwritten signature of Sam Cotten.

Representative Sam Cotten
Co-Chair, ITC Group

Handwritten signature of Bettye Fahrenkamp.

Senator Bettye Fahrenkamp
Co-Chair, ITC Group

SC:BF:jss

Attachment: Agenda

cc: Jim Palmer (w/attachment)
BP Exploration (Alaska), Inc.

Bob Van Hook (w/attachment)
BP Exploration (Alaska), Inc.



Official Business

Alaska State Legislature

P.O. Box V
State Capitol
Juneau, Alaska 99811

March 7, 1990

W. E. Wade, President
ARCO Alaska, Inc.
PO Box 100360
Anchorage, AK 99510

Dear Mr. Wade:

On behalf of the International Tax Comparison Group, we would like you to join the Group for dinner at The Summit on Monday, March 19, 1990, at 7:00 p.m.

The purpose of the dinner will be to share opinions with our consultants on the tax comparison work to date.

On Tuesday, March 20, 1990, members of your staff are invited to attend a work session from 1:30 p.m. to 5:00 p.m. with the consultants. This will be held in the Gastineau Suite of the Baranof Hotel.

We hope you will be able to join us.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Sam Cotten".

Representative Sam Cotten
Co-Chair, ITC Group

A handwritten signature in cursive script, appearing to read "Bettye Fahrenkamp".

Senator Bettye Fahrenkamp
Co-Chair, ITC Group

SC:BF:jss

Attachment: Agenda

cc: John Roots, Vice President (w/attachment)
Government Affairs
ARCO Alaska, Inc.
PO Box 100360
Anchorage, AK 99510



Official Business

Alaska State Legislature

P.O. Box V
State Capitol
Juneau, Alaska 99811

March 7, 1990

C. T. Theriot
Alaska Interest Manager
EXXON Company, U.S.A.
PO Box 2180
Houston, TX 77252

Dear Mr. Theriot:

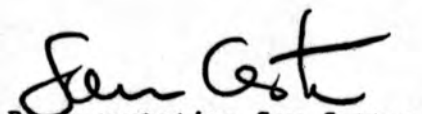
On behalf of the International Tax Comparison Group, we would like you to join the Group for dinner at The Summit on Monday, March 19, 1990, at 7:00 p.m.

The purpose of the dinner will be to share opinions with our consultants on the tax comparison work to date.

On Tuesday, March 20, 1990, members of your staff are invited to attend a work session from 1:30 p.m. to 5:00 p.m. with the consultants. This will be held in the Gastineau Suite of the Baranof Hotel.

We hope you will be able to join us.

Sincerely yours,


Representative Sam Cotten
Co-Chair, ITC Group


Senator Bettye Fahrenkamp
Co-Chair, ITC Group

SC:BF:jss

Attachment: Agenda

cc: Dave Parrish (w/attachment)
Tom Cirigliano (w/attachment)
EXXON Company, U.S.A.
PO Box 196601
Anchorage, AK 99519-6601

INTERNATIONAL TAX COMPARISON GROUP

SUNDAY, MARCH 18--Commissioner Malone, Jim Rhode dinner (Jim)

MONDAY, MARCH 19

9:00-11:00---Part One...Work session between consultants and ITC Group...Speaker's Chambers (Billy)

11:00-12:00 House and Senate floor sessions (Jerry)

12:00-1:30---LUNCH...(tentative) Governor's House...Governor and Administration officials, consultants only (Jim)

1:30-3:30---Part Two...Continuation of work session between consultants and ITC Group...Speaker's Chambers (Billy)

3:30-5:30---Meeting with other Administration officials...Governor's Conference Room (Steve Cole)

7:00---DINNER...Hosted by Sen. Fahrenkamp--Summit (Nancy)

Guests: Nine committee members; Consultants; B. Wade and John Roots of Arco; Bob Van Hook and Jim Palmer of BP; Dave Parrish and Ken Rather of Exxon (Billy)

TUESDAY, MARCH 20

8:30-10:00---Progress report to House and Senate Resources and House Finance Committees...House Finance Committee Room (Tally)

11:00-12:00---OPEN

12:00-1:30---LUNCH...Brown Bag lunch for staffers and legislators in Speaker's Chambers...general Q and A (Billy)

1:30-5:00---Work session with Oil Industry staff and consultants in Gastineau Suite, Baranof Hotel (Tally)

6:30---DINNER...OPEN

WEDNESDAY, MARCH 21

9:00-10:00...Progress report to Senate Finance Committee (Tally)

10:00-12:00---OPEN

12:00-1:30---LUNCH...OPEN

1:30-5:00---OPEN

miles 2/26

INTERNATIONAL TAX COMPARISON GROUP...first draft consultant agenda

SUNDAY, MARCH 18 (arrival time to come)

MONDAY, MARCH 19

9:00-~~10:00~~¹¹---Coffee reception--ITCG Group--Speaker's Chambers(Billy)

10:00-12:00 House and Senate floor sessions (Jerry)

LUNCH---OPEN

1:30-3:30---Meet with ITCG--Butrovich Room(Nancy)(ITCG Committee) *closed. Speakers*
only or open?)

3:30-5:30---OPEN Administration - Gov. ofc

7P ~~6:30~~---DINNER Hosted by Speaker--~~Baranof~~ (Billy)
B. Wade and John Roots of Arco; Julian Darley and Jim Palmer of
BP; Dave Parrish and new person of Exxon(Tally contact) — 3

20-

6+3 = 9
6/15

Reithen
(- Ken Ryther
- Paul Sullivan - tax counsel
- Dave Parrish

TUESDAY, MARCH 20

9:00-11:00---Presentation to Joint Finance Committees (Tally)

11:00-12:00---OPEN H/maj/caucus

12:00-1:30---LUNCH...Brown Bag lunch for staffers and legislators in
Speaker's Chambers...general Q and A (Billy)

1:30-3:00---Press Conference...Speaker's Chambers (Billy)

3:00-5:00---Presentation to Joint Resources...House Resources (Nancy)

6:30---DINNER...Commissioners Malone and Gorsuch to host
Administration dinner at Baranof (Billy/Jim Rhode or Hugh
Malone...Tally/Lennie Gorsuch)(Tally to coordinate)

WEDNESDAY, MARCH 21

9:00-12:00--Meeting with Oil Industry staff

12:00-1:30--LUNCH...Open

1:30--AFTERNOON OPEN

*do memo - other committees
- have presented
time avail.*

h/s

*Sen
Jim.
9-11*

*Comm
Revenue*

Billy

- Bethye says OK on everything.
- I have ~~contacted~~ The authoringtion for the hosted dinner + reservations at the Baranof for 16.

3 consultants

6 Senate/House Members

6 Oil participants

1 Speaker Colter

16

She thought some wanted 11/7 in
to be sure we'd have a full room.

9 AM

Mon, 19th

- 10A

~~9:00A~~ 9:00A 8 AM's of coffee

group - 6-

→ all legislators

Comm

Lennie

Denny

Floor Session

Jerry Schile

10-12

lunch open

1:30P - 3:30

Leg. only

✓ room x time

* private *

-(Int'l TAX group)

3:30 - 5 open

mon nite:

March 20

Dinner + Made, Julian Daily + Exxon

Talley contact
Bill host

Tue.

3-5
Jt. Resi.
H/res

honey +

sales 9 AM - 11:30

Jt. Fir

→ Bro. Bag 12 noon
followed bag

4:30 PM

Press conf.

- 1:30 PM -

dinner

Hugh + Lennie host

Talley - Jennie
Mill - Jim Rhode
or Hugh

Wed.

10:30 - 12: consultants

oil + gas undercat. Staff

lunch open aft open

Administration

Jennie + Hugh

leave open.

maybe
dinner
Tue eve.

STATE OF ALASKA

DEPARTMENT OF REVENUE

OIL AND GAS AUDIT DIVISION

STEVE COWPER, GOVERNOR

550 WEST 7TH AVENUE, SUITE 560
ANCHORAGE, ALASKA 99501
PHONE: (907) 277-5627
PHONE: (907) 276-1363

February 9, 1990

A.G. Kemp/David Rose
Aberdeen University Petroleum
and Economic Consultants
Dept. of Economics
Edward Wright Building, Dunbar St.
Aberdeen, AB9 2TY, Scotland, UK

FEB 13 1990

Dear Alex,

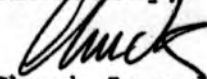
A representative from Exxon has asked some questions concerning the modelling effort. I was unable to answer the following questions.

1. Are agreements to provide crude oil or products to local markets at below market price included in the Indonesia example?
2. Are the production agreements with Indonesia on a cost of work or production sharing basis?
3. Does the Australian example use the excise tax or the resource rent tax?
4. What price of oil is used?

We continue to work with the big three Prudhoe Bay producers (ARCO, EXXON, and BP) on an informal basis examining the cost/production numbers we have provided you with. So far, as might be expected, most questions concern the cost assumptions being too low.

Please let me know what the status of your work is and in particular if there is anything that we have sent to you which needs clarification.

Sincerely,


Chuck Logsdon

cc: Peter Gaffney
Homa Motamen
Hugh Malone
Betty Fahrenkamp
Sam Cotten

FEB 23 1990

February 21, 1990

A.G. Kemp/David Rose
Aberdeen University Petroleum
and Economic Consultants
Dept. of Economics
Edward Wright Building, Dunbar St.
Aberdeen, AB9 2TY, Scotland, UK

Dear Alex,

I have been attempting to put together a better series on exploration and acquisition costs as incurred for the Alaska fields of interest. I am including a copy of the best guess we have. Essentially it is an attempt to illustrate the timing of the lump sum numbers I gave you last week.

What we will do is to inflate these numbers using the GNP deflator series to 1990 \$ for the developable fields and bring the Prudhoe numbers up to 1975 for cash flow purposes.

I have spoken to Peter and he spoke with me about using 12.5% for a discount rate. He also wants to have February 26 as the last date for data changes. John Larson is laboring mightily to complete the basic runs by Friday.

I have also included the new expanded version of the Hurl State analog.

I told Peter that I would like to phone you Monday (Feb 26) so we can discuss progress, methodology, etc. I would try to call sometime shortly after 8:00 am Alaska time (just in case the roads are bad and I can't make it to work at exactly 8:00)

Sincerely,

Chuck
Chuck Logsdon

cc: Peter Gaffney
Homa Motamen
Hugh Malone
Betty Fahrenkamp
Sam Cotten

**EXPLORATION COSTS
FOR
THE INTERNATIONAL TAX COMPARISON STUDY
(MILLIONS OF DOLLARS)**

YEAR	PRUDHOE BAY		WEST SAK		NORTH STAR		NIJARUK	
	ACQUISITION AND SUCCESSFUL EFFORTS EXPLORATION HISTORIC COSTS	UNSUCCESSFUL EFFORTS AND EXPLORATION DELINATION HISTORIC COSTS	ACQUISITION AND SUCCESSFUL EFFORTS EXPLORATION HISTORIC COSTS	UNSUCCESSFUL EFFORTS AND EXPLORATION DELINATION HISTORIC COSTS	ACQUISITION AND SUCCESSFUL EFFORTS EXPLORATION HISTORIC COSTS	UNSUCCESSFUL EFFORTS AND EXPLORATION DELINATION HISTORIC COSTS	ACQUISITION AND SUCCESSFUL EFFORTS EXPLORATION HISTORIC COSTS	UNSUCCESSFUL EFFORTS AND EXPLORATION DELINATION HISTORIC COSTS
1965	5	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0
1967	4	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0
1969	86	25	0	0	0	0	0	0
1970	0	25	0	0	0	0	0	0
1971	0	25	0	0	0	0	0	0
1972	0	25	0	0	0	0	0	0
1973	0	25	0	0	0	0	0	0
1974	0	25	0	0	0	0	0	0
1975	0	25	0	0	0	0	0	5
1976	0	25	0	0	0	0	0	20
1977	0	25	0	0	0	0	0	5
1978	0	0	0	0	0	0	0	0
1979	0	0	0	0	5	0	27	5
1980	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0
1983	0	0	0	0	50	0	0	0
1984	0	0	33	0	45	0	20	0
1985	0	0	33	0	40	0	5	0
1986	0	0	33	0	40	0	5	0
1987	0	0	33	0	40	0	3	0
1988	0	0	33	0	40	0	3	0
1989	0	0	35	0	40	0	2	0
SUM THRU 89	95	225	200	0	300	0	65	35
SUM SUCCESS & UNSUCCESS		320		200		300		100

1) Acquisition and successful efforts exploration costs have no immediate tax benefits, they must be carried at historic cost basis and amortized on a units of production basis once production starts.

2) Unsuccessful efforts exploration cost are written off at abandonment of the lease, their after tax cost is therefore a function of the marginal income tax rate of corporation which incurs them.

EXTENSION COSTS

PRUDHUE NAT		WEST SAR		NORTH STAR		NIAGARA	
AFTER TAX		AFTER TAX		AFTER TAX		AFTER TAX	
ACQUISITION AND SUCCESSFUL EFFORTS	UNSUCCESSFUL EFFORTS	ACQUISITION AND SUCCESSFUL EFFORTS	UNSUCCESSFUL EFFORTS	ACQUISITION AND SUCCESSFUL EFFORTS	UNSUCCESSFUL EFFORTS	ACQUISITION AND SUCCESSFUL EFFORTS	UNSUCCESSFUL EFFORTS
1975 & 8'S COSTS	1975 & 8'S COSTS	1975 & 8'S COSTS	1975 & 8'S COSTS	1975 & 8'S COSTS	1975 & 8'S COSTS	1975 & 8'S COSTS	1975 & 8'S COSTS
THRU 1974	THRU 1974	THRU 1974	THRU 1974	THRU 1974	THRU 1974	THRU 1974	THRU 1974
1965	8.77	0.00	0.00	0.00	0.00	0.00	0.00
1966	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1967	6.61	0.00	0.00	0.00	0.00	0.00	0.00
1968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1969	128.10	20.11	0.00	0.00	0.00	0.00	0.00
1970	0.00	19.06	0.00	0.00	0.00	0.00	0.00
1971	0.00	18.03	0.00	0.00	0.00	0.00	0.00
1972	0.00	17.22	0.00	0.00	0.00	0.00	0.00
1973	0.00	16.17	0.00	0.00	0.00	0.00	0.00
1974	0.00	14.83	0.00	0.00	0.00	0.00	0.00
1975	0.00	13.50	0.00	0.00	0.00	0.00	0.00
1976	0.00	13.50	0.00	0.00	0.00	0.00	0.00
1977	0.00	13.50	0.00	0.00	0.00	0.00	0.00
1978	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1979	0.00	0.00	0.00	8.32	0.00	44.92	4.49
1980	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1981	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1982	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1983	0.00	0.00	0.00	62.94	0.00	0.00	0.00
1984	0.00	0.00	40.07	54.64	0.00	24.28	0.00
1985	0.00	0.00	38.81	47.04	0.00	5.88	0.00
1986	0.00	0.00	37.82	45.84	0.00	5.73	0.00
1987	0.00	0.00	36.75	44.55	0.00	3.34	0.00
1988	0.00	0.00	35.53	43.07	0.00	3.23	0.00
1989	0.00	0.00	36.57	41.80	0.00	2.09	0.00
1990	0.00	0.00					
SUM THRU 89		225.54	0.00	348.18	0.00	89.48	38.07
SUM SUCCESS & UNSUCCESS	143.48	105.42	225.54	348.18			127.55
SUM THRU 74							
SUM SUCCESS & UNSUCCESS	248.91						
THRU 74							
1975	262.41						
1976	13.50						
1977	13.50						
ADJUSTMENTS TO AFTER TAX CURRENT DOLLAR (000) NET CASH FLOW							
FOR EXPLORATION COSTS							
PRUDHUE NAT		WEST SAR		NORTH STAR		NIAGARA	
1975	762.41	1990	225.54	1970	148.18	1990	127.55
1976	13.50						
1977	13.50						

20 FEB 90

PRUDHOE BAY INCREMENTAL CASE
EXPANDED HURL STATE ANALOG
(1990 MONEY)

YEAR	(MMBO/YR) INCREMENTAL PRODUCTION	(\$MM) TOTAL INCREMENTAL CAPCOST	(\$MM) INCR FACILITY CAPCOST	(\$MM) INCR WELL CAPCOST	#PROD WELLS	TOTAL WELLS	(\$MM) OPCOST
1990		1092.00	1000.00	92.00	31	46	
1991	58.76	688.00	596.00	92.00	61	92	57.50
1992	75.00				61	92	75.59
1993	66.00				61	92	68.51
1994	58.08				61	92	62.10
1995	51.11				61	92	56.29
1996	44.98				61	92	51.02
1997	39.58				61	92	46.24
1998	34.83				61	92	41.92
1999	30.65				61	92	37.99
2000	26.97				61	92	34.44
2001	4.04				61	92	5.31
2002							
2003							
2004							
2005							
2006							
TOTAL	490.00	1780.00	1596.00	184.00			

ASSUMPTIONS

- 1.) INCREMENTAL RESERVES = 10% OF REMAINING PBU RESERVES, I.E.
 $(10\%) \times (4.9880) = 490 \text{ MMBO}$.
- 2.) INCREMENTAL DEVELOPMENT COSTS = 10% OF ORIGINAL REAL PBU DEV COSTS,
I.E. $(10\%) \times (17.836) = \$1.78 \text{ BILLION}$
- 3.) TOTAL OPCOSTS INCREASE 3%/YR OVER LIFE OF INCREMENTAL PROJECT.
ASSUME INITIAL OPCOSTS ARE \$0.95/BBL.
- 4.) WELL COSTS ARE \$2MM/WELL. THE BALANCE OF CAPCOSTS ARE ASSUMED TO
BE FACILITY ORIENTED.
- 5.) RECOVERY PER WELL IS ASSUMED TO BE 8 MMBO/WELL. WELL COUNT IS
DERIVED BY $(490 \text{ MMBO}) / (8 \text{ MMBO/WELL}) = 61 \text{ PRODUCING WELLS}$. TOTAL
WELLS ASSUMED TO BE 1.5 TIMES PRODUCING WELLS (USE 92 WELLS).
- 6.) INITIAL WELL RATE IS 3500 BOPD. DECLINE RATE IS 12%/YR.
- 7.) DRILLING SCHEDULE IS AGGRESSIVE: 20 DAYS PER WELL, 5 RIGS WORKING
FULL TIME TO ACHIEVE PEAK PRODUCTION IN SECOND YEAR (1991).
RIGS STARTUP 7/1/90.

miles2/26...second draft agenda for consultants

INTERNATIONAL TAX COMPARISON GROUP

SUNDAY, MARCH 18 (arrival time to come)

MONDAY, MARCH 19

ok 9:00-11:00---Part One...Presentation by consultants to ITC Group...Speaker's Chambers (Billy)

11:00-12:00 House and Senate floor sessions (Jerry) ok ~~or Nancy~~

LUNCH---OPEN (Tally-working w/ Admin)

ok 1:30-3:30---Part Two...Presentation by consultants to ITC Group...Speaker's Chambers (Nancy)

3:30-5:30---Presentaion to 'Other' Administration officials...Governor's Conference Room (Tally) ~~Chuck~~ Denby + Mary Halloran

→ OK 6:30---DINNER Hosted by Sen. Fahrenkamp--Baranof (Billy) Nancy - setup

Guests: Nine committee members, Consultants, B. Wade and John Roots of Arco; Julian Darley and ~~Jim Palmer~~ of BP; Dave Parrish and Ken Rather of Exxon (Tally contact.) ~~Bob Van Hook~~

bill
delivery order #

12th 3+6 9+6 = 15
+ speaker 1
16

(20)

TUESDAY, MARCH 20

8:30-10:00---Presentation to House and Senate Finance and Resources Committees in ~~House Finance~~ (Senate Finance) (Tally and Nancy) (Tally)

11:00-12:00---OPEN

12:00-1:30---LUNCH...Brown Bag lunch for staffers and legislators in Speaker's Chambers...general Q and A (Billy)

1:30-3:00---Press Conference...Speaker's Chambers (Billy)

3:00-5:00---OPEN

6:30---DINNER...Commissioner ~~Gorsuch~~ Malone to host Administration dinner at Baranof (Tally/Lennie Gorsuch) (Tally to coordinate) (Jim Rhade) (Billy)

WEDNESDAY, MARCH 21

9:00-12:00--Meeting with Oil Industry staff Cartineau suite?

12:00-1:30--LUNCH...Open (Gov-sec checking) John Ringstad

→ 1:30--AFTERNOON OPEN

file int'l tax

Alaska State Legislature

Senate Resources Committee

Senator Bettye Fahrenkamp, Chairman
Senator Jay Kerttula, Vice Chairman
Senator Dick Eliason
Senator Steve Frank
Senator Rick Halford
Senator Arliss Sturgulewski
Senator Fred Zharoff



P.O. Box V
Juneau, Alaska 99811
(907) 465-4907

To: All Legislators

From: Senator Bettye Fahrenkamp *BF*
Chairman, International Tax Comparison Group

Re: International Tax Comparison Group meeting

Date: January 10, 1990

The International Tax Comparison Group will meet in the Senate Finance Room:

Friday, January 12, 1990, 1:30 p.m. to 4:30 p.m.

Saturday, January 13, 1990, 10:00 a.m. to 3:00 p.m.

Sunday, January 14, 1990, if additional time is needed.
(Announcement will be made on Saturday)

The purpose of this meeting is to allow three oil tax consultants to brief the group on their further progress of their analyses of the investment climate for the oil industry here compared to that in competing oil producing areas. The consultants' presentations will focus on advice, interpretation and discussions of alternate revenue sharing approaches taken in other petroleum provinces.

As you may know, the International Tax Comparison Group was established last summer by the Legislative Council and is a cooperative effort by the Legislature and the Cowper administration to review the State of Alaska's oil tax policy.

I urge you to attend.

Revenue
6 Mar 90

Nancy:

My files say that I sent you a copy of this letter earlier, but I want to be sure you've seen the marked part. As things stand, the idea would be to bring the consultants back the first week in April to explain the final report. We are not thinking of later because the forecast is due out the 9th, which changes the focus of the session, followed by the Easter Weekend, their last break prior to adjournment.

I assume Legislative Affairs can meet your requirements but, if not, let me know and I'll help in any way possible.

Sincerely,

Jim

March 19
75 feet, no
2350
not avail.

GAFFNEY, CLINE & ASSOCIATES LTD

Energy Advisers

principals: William B. Cline
Peter D. Gaffney

Registered London No. 1122740

Sent by fax 22/1/90

Bentley Hall
Blacknest, Alton
Hampshire GU34 4PU
Telephone: Bentley (0420) 23366
Cable: Techserv Alton Hants
Telex: 858185
Telecopier: (0420) 22357

PDG/bat/A458/1247

22 January, 1990

Mr James B Rhode
Special Assistant to the Commissioner
State of Alaska
Department of Revenue
P O Box S
Juneau
ALASKA 99811-0400

Dear Jim,

Attached please find the promised, very preliminary, draft Table of Contents. It would be the intention to make the Executive Summary a stand-alone document with a much reduced graphics and description section. There may be some additions to this list and certainly some deletions or modifications as we get a little bit further into the project. The intention however, insofar as is possible, would be to minimise the amount of description and optimise the graphic presentation material so as to make the document readable and hopefully understandable by the non technical/economics reader.

The intent would be to use exactly the same visual aids and tables for the presentation as used in the report so that one could be used to follow the other and also so that a shortened version could be given where necessary.

One practical aspect which comes to mind is that it will almost certainly be easier and more effective to present the material in 35 mm slides. Even if we use overheads it would still be very desirable to have a much larger screen than the one previously available, as it has been demonstrated in the past that it is far easier to get a message across to people unfamiliar with technical presentations if they can see it on a large screen where the descriptions are clear. I would therefore be grateful if you could check on the availability of a 10 to 12 feet wide screen. The width is more critical than the height, which should be 8 feet maximum; the screen would need to stand off the floor at a height of 2 to 3 feet ideally. The projector we use will also need to be able to fill that large screen. It should be possible to find a boxed version in Juneau or Anchorage, but if this is not possible then we should arrange to get one brought in. I consider this a critical aspect for the success of our presentation - to the extent possible where I am sure we can move screens and projectors from room to room, it would be extremely

Mr James B Rhode
State of Alaska

- 2 -

22 January, 1990

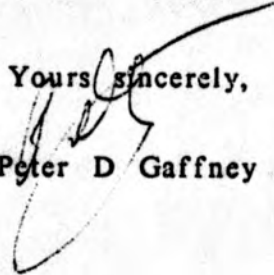
useful if we could set up a room where the majority of the committee and public participants have a reasonable chance to see what was going on. I wished to raise these points early so that there is plenty of time to arrange for the necessary equipment.

As far as the agenda is concerned, at this stage I would be especially interested in any comments you have regarding other key topic headings which might need to be included in favour of ones less important which might be deleted.

As indicated above I do not think we will be setting much of this in concrete in the very near future, but your early comments would naturally be much appreciated.

Regards,

Yours sincerely,


Peter D Gaffney

Encl

cc: Professor Alex Kemp
Dr H Motamen Scobie

STATE OF ALASKA
ROUTE SLIP

TO: Mail Station	Department <i>LEG.</i>	Division												
Attention <i>SEN. FAHRENKAMP</i> <i>- NANCY PETERSEN, AA.</i>														
<table><tr><td>☐ Approval</td><td>☐ Note & Return</td></tr><tr><td>☐ Signature</td><td>☐ Initial & Return</td></tr><tr><td>☐ Comment</td><td>☐ Return as Requested</td></tr><tr><td>☐ Contact Me</td><td>☐ Return for Approval</td></tr><tr><td>☐ Prepare Reply</td><td>☒ Necessary Action</td></tr><tr><td>☐ For Your File</td><td>☐ For Your Information</td></tr></table>			☐ Approval	☐ Note & Return	☐ Signature	☐ Initial & Return	☐ Comment	☐ Return as Requested	☐ Contact Me	☐ Return for Approval	☐ Prepare Reply	☒ Necessary Action	☐ For Your File	☐ For Your Information
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☐ Prepare Reply	☒ Necessary Action													
☐ For Your File	☐ For Your Information													
Remarks: <i>CAP. RM. 125</i>														
FROM: Mail Station <i>0400</i>	Department <i>REV.</i>	Division <i>TEL. 2350</i>												
By <i>Jim. Rhoads</i>		Date <i>6 Apr 90</i>												

Alaska State Legislature



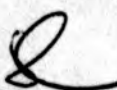
Speaker of the House of Representatives

Official Business

Pouch V
State Capitol
Juneau, Alaska 99811
(907) 465-3720

January 31, 1989

TO: Pam Stoops, Director
Administrative Services, LAA

FROM: Sam Cotten, Speaker 
House of Representatives

SUBJECT: Contract Amendment

Please amend the contracts for the consultants to the International Oil Tax Comparison Groups, Peter Gaffney, Professor Kemp and Homa Motamen in line with the attached letter from the Commissioner of Revenue, Hugh Malone. The contracts are being amended from an amount not to exceed \$20,000 each, to an amount not to exceed \$60,000 each. Since this makes a total of \$180,000 for the three contracts, it is important to note that, under no circumstances, is the total legislative share of the tax comparison consultant contracts to exceed \$120,000. The balance of the funds for these contracts will come from an RSA of \$60,000 from the Department of Revenue. Please initiate whatever action is required for the RSA.

If you have any questions concerning this matter, please contact Jerry Schilz in House Rules at 465-3824.

cc: Hugh Malone, Commissioner
Department of Revenue

Jim Rhode, Special Assistant
Department of Revenue

STATE OF ALASKA

DEPARTMENT OF REVENUE

OFFICE OF THE COMMISSIONER

STEVE COWPER, GOVERNOR

P.O. BOX 5
JUNEAU, ALASKA 99811-0400
PHONE: (907) 465-2300
TELEFAX: (907) 465-2389

January 25, 1990

rec'd 1/26/90

The Honorable Sam Cotten
Speaker of the House
P.O. Box V
Juneau, AK 99811

Dear Mr. Speaker:

You asked that I send you a letter about our discussions on completing the international oil tax comparison on time.

Essentially, two things have changed since we began the study. First, the economic section of the Oil and Gas Division of the department of revenue is not going to be able to carry out as much of this effort as originally expected. (This is the combined result of less time for the work due to the start-up time for selection of the consultants, etc., personnel changes and a maternity leave.) Therefore, we must rely on the consultants for the bulk of the work for the report. Secondly, we are not going to have to spend extra money on economic models and data inputs; our consultants have agreed to provide them for the countries in our comparisons. This frees up \$65,000 or a little more than half of the \$125,000 set aside for this report by the Legislative Council.

We now know that completing the report (statistical comparisons between Alaska and four other oil areas, a narrative, and a section contrasting a number of industry/government relationships in recent years) will cost a total of \$185,000. This will include the final review and revision of the report by the working group with the consultants on March 19 and 20. ^{60,000} \$60,000 of the cost has been committed from legislative funds, ~~\$65,000~~ will come from the balance of those funds, and the remaining \$60,000 will come from an RSA with the Department of Revenue.

The contracts with the consultants need to be amended so that fees and expenses in each case will "not exceed \$60,000." Dr. Kemp & Associates agree "to collaborate on a report comparing the government fiscal regimes in four oil areas with that in Alaska"; they will have prime responsibility for the DCF analysis and other statistics required. Gaffney, Cline agree "to collaborate on a report", etc.; they will have prime responsibility for the narrative on the comparisons. Dr. Homa Motamen agrees "to collaborate", etc.; she will have the prime responsibility for discussing the financial aspects of the comparisons and for preparing a section on industry and government interaction.

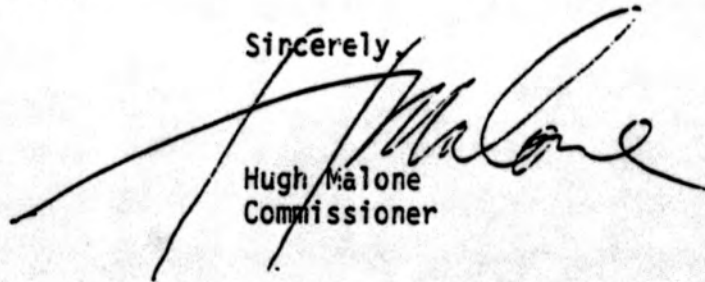
I believe that the day-to-day coordination of the project is best carried out by a single project coordinator in the Department of

The Honorable Sam Cotten
January 25, 1990
Page 2

Revenue. Chuck Logsdon can best accomplish this. Jim Rhode will monitor this work and I will see to it that all the members of the working group are kept informed.

The various deadlines for the report should be mutually agreed in writing, but not set in the contract.

Sincerely,

A handwritten signature in dark ink, appearing to read "Malone", with a long, sweeping horizontal stroke extending to the left.

Hugh Malone
Commissioner

HM:JBR:m11
9C-09

Alaska State Legislature

Senate Resources Committee

Senator Bettye Fahrenkamp, Chairman

Senator Jay Kerttula, Vice Chairman

Senator Dick Eliason

Senator Steve Frank

Senator Rick Halford

Senator Arliss Sturgulewski

Senator Fred Zharoff



P.O. Box V
Juneau, Alaska 99811
(907) 465-4907

To: All Senate and House Members

From: Senator Bettye Fahrenkamp *Bettye*
Chair, International Tax Comparison Group

Re: Report by International Tax Consultants

Date: March 15, 1990

The International Tax Comparison Group, comprised of three senate members, three house members, and three administration members, has met throughout the interim in order to develop economic models to compare Alaska's tax policy to that of other countries. Three international tax consultants have been under contract to provide advice and technical analysis to the group. The consultants were in Juneau in January to meet with the group and will be here again March 19 - 21.

On Tuesday, March 20, from 8:30 a.m. to 10:00 a.m., the consultants will present a progress report to the Joint House and Senate Resources Committees and House Finance Committee. The meeting will be held in the House Finance Committee Room.

On Wednesday, March 21, from 8:30 a.m. to 9:30 a.m., the consultants will present a progress report to the Senate Finance Committee, to be held in the Senate Finance Committee Room.

I welcome your participation.



Official Business

Alaska State Legislature

SENATE

P.O. Box V
State Capitol
Juneau, Alaska 99811

MEMORANDUM

TO: Senator John Binkley, Co-Chair
Senate Finance Committee

Senator Rick Uehling, Co-Chair
Senate Finance Committee

FROM: Senator Bettye Fahrenkamp, Chair *Bettye Fahrenkamp*
International Tax Comparison Group

Representative Sam Cotten
International Tax Comparison Group

DATE: March 6, 1990

RE: Scheduling Joint Finance and Resources Meeting

On Tuesday, March 20th from 8:30 a.m. to 10:00 a.m. the International Tax Comparison Group (ITCG) would like to have a joint Senate and House Finance and Resources Committees meeting. This time would allow the ITCG consultants an opportunity to present their draft preliminary report.

We would like this joint meeting held in Senate Finance. If there is a problem with scheduling this meeting and the room, please call Nancy Peterson of Senator Fahrenkamp's Office as soon as possible.

Thank you.

DP:tej

6-4797



NATIONAL CHECKING CO., ST. PAUL.

Inn @ Waterfront
 455 S. Franklin
 Juneau 99801

DATE	SERVER	TABLE NO.	PERSONS	CHECK NO.
3/19	M&F		17	468920
1	21.95 x 17			373.15
2	persons			
3	City tx			14.92
4	Bar			89.50
5	15% Grat			70.
6				
7				
8				
9				
10	FOOD TOTAL:			
11	TAX:			
	SUB TOTAL:			

BAR CHARGES FROM OTHER SIDE:

TOTAL: 547.57

GUEST RECEIPT

DATE	SERVER	TABLE NO.	PERSONS	CHECK NO.

Chuck Gogsdon -
re conclusions from inter
fax study - he doesn't
have those; talk to
Hugh Malone or Jim
Rhode

STATE OF ALASKA THE LEGISLATURE

LEGISLATIVE AFFAIRS AGENCY

P.O. BOX Y, STATE CAPITOL
JUNEAU, ALASKA 99811
907 465-3800

March 19, 1990

Senator Bettye Fahrenkamp
Project Director
Chair, International Oil Tax Comparison Group
P.O. Box V
Juneau, AK 99811

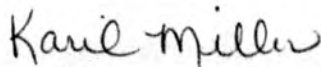
Dear Senator Fahrenkamp:

Enclosed for your records is a fully signed copy of the contract between Aberdeen University Research and Industrial Services, Ltd. and the Alaska Legislative Council.

Section 190 of the Legislative Procurement Procedures states that, "If a services or professional services contract is awarded by a Legislative Committee, the committee or the Procurement Officer shall provide a written evaluation of the services provided under the contract before final payment on the contract may be made.

We have included a Contract Evaluation Form for your convenience in complying with this requirement. This evaluation form should accompany the final approved billing for the contract services. Please sign as project director and forward the completed evaluation form for signature to Representative Mike Davis, procurement officer, prior to submitting the final billing to the Accounting Office for payment. If you prefer, a memo may be substituted for the evaluation form. The memo need only address the evaluation factors you consider pertinent to the contract.

Sincerely,



Karil Miller
Administrative Assistant

Enclosure

CONTRACTOR EVALUATION FORM

NAME OF CONTRACTOR: Aberdeen University Research & Industrial Services, Ltd(Amendment)

PURPOSE OF CONTRACT: To complete a report comparing the fiscal regimes in four
(Brief Description) oil areas with that of Alaska. The Consultant will also
provide economic models and data inputs for the countries
in the comparisons.

SERVICES PERFORMED FOR Alaska Legislative Council
(Committee Name)

CONTRACT PERFORMANCE

Yes

No

The Contractor:

Performed all the requested services.

Produced a satisfactory product.

Performed the services in a timely manner.

Met all the terms and conditions of the contract.

OTHER COMMENTS:

Senator Fahrenkamp
Project Director

Representative Mike Davis
Procurement Officer

International Oil Tax Comparison Group
Committee

Alaska Legislative Council
Committee

CONTRACT AMENDMENT

ALASKA LEGISLATIVE COUNCIL

AND

ABERDEEN UNIVERSITY RESEARCH AND INDUSTRIAL SERVICES, LTD.

DEPARTMENT OF ECONOMICS

UNIVERSITY OF ABERDEEN

EDWARD WRIGHT BUILDING

DUNBAR STREET

ABERDEEN, AB9 2TY, SCOTLAND, UK

AMENDED CONTRACT AMOUNT: \$60,000

The parties to this contract amendment, made and entered into this 19th day of March, 1990, are the Alaska Legislative Council ("Agency"), on behalf of the International Oil Tax Comparison Group (hereinafter referred to as the "Group"), and Aberdeen University Research and Industrial Services, Ltd. (hereinafter referred to as the "Consultant"). This document amends the December 29, 1989 professional services contract between the Consultant and the Alaska Legislative Council to advise and assist the Group in obtaining an economic model that will allow State policy makers to compare, each year, on a risk adjusted basis, the investment climate for the oil industry in Alaska with other competing oil areas.

1. IT IS AGREED THAT:

a. CLAUSE I, STATEMENT OF WORK, IS AMENDED BY ADDING THE FOLLOWING PARAGRAPHS:

- (9) To complete a report comparing the fiscal regimes in four oil areas with that of Alaska, in collaboration with Dr. Homa Motamen and Gaffney, Cline and Associates, Inc.;
- (10) The Consultant agrees to provide economic models and data inputs for the countries in the comparisons.

b. Paragraph (E) of CLAUSE IV, COMPENSATION AND METHOD OF PAYMENT, IS AMENDED TO READ AS FOLLOWS:

- (E) Total payments under this contract, including reimbursement for expenses, may not exceed Sixty Thousand and No/100 Dollars (\$60,000).

2. Execution of this amendment was authorized by a majority of the members of the Legislative Council on February 23, 1990. Execution of this amendment by the chair

of the Council constitutes the signed authorization required by Procurement Procedures sec. 150 (b); the committee members who authorized the amendment delegated their sec. 150 signature responsibilities to the chair of the Council on January 13, 1989.

3. Execution of this amendment by the Legislative Affairs Agency Executive Director or his designee hereby constitutes a certification that funds have been appropriated and encumbered for the amount of this amended contract.

IN WITNESS WHEREOF, the parties have executed this amendment to this contract on the dates indicated below.

CONSULTANT
ABERDEEN UNIVERSITY RESEARCH AND
INDUSTRIAL SERVICES, LTD. (AURIS)
Soc. Sec. No.:
Tax ID No.:
Alaska Business License: _____

Alex G. Kemp
Prof. Alexander G. Kemp Date
Director
Aberdeen University Petroleum and
Economic Consultants, a division of
AURIS

AGENCY
ALASKA LEGISLATIVE COUNCIL

Mike Davis
Rep. Mike Davis, Chair Date
Procurement Officer

Sam R. Cotten
Rep. Sam Cotten Date
Speaker, House of Representatives

Bettye Fahrenkamp
Senator Bettye Fahrenkamp Date
Project Director
Chair, International Oil Tax
Comparison Group

Hugh Malone 3/19/90
Hugh Malone, Commissioner Date
Department of Revenue

Certifying Authority

Warren W. Endicott 3/19/90
Warren W. Endicott Date
Executive Director
Legislative Affairs Agency

Approved as to Form

Theresa L. Bannister 3-15-90
Legal Counsel Date

DRAFT

I N T E R N A T I O N A L

T A X C O M P A R I S O N S T U D Y

F O R

S T A T E O F A L A S K A

DRAFT

C O N C L U S I O N S

- * **BROAD COMPARISONS ARE POSSIBLE
AND USEFUL**
- * **THE COMPANIES DID WELL IN PRUDHOE BAY**
- * **THE STATE DID WELL IN PRUDHOE BAY**
- * **IF WE LOOK BACK THE STATE MIGHT HAVE
DONE BETTER IN '81-'83 BUT**

DRAFT

C O N C L U S I O N S

- * **THERE IS NO PANACEA LEGISLATION**

- * **NO-ONE ELSE FOUND AND DEVELOPED A
10 BILLION BARREL FIELD IN THE PERIOD**

- * **IF THEY HAD, THEIR LEGISLATION MIGHT HAVE
BEEN TOUGHER**

- * **ENCOURAGING INCREMENTAL PROJECTS ARE A BIG
PROBLEM ELSEWHERE - YOU AREN'T ALONE
IN THE DIFFICULT CHOICE OF :**

BALANCING JAM NOW versus CAVIAR TOMORROW!

...

DRAFT

C O N C L U S I O N S

- * THE COMPANIES WILL DO WELL IN THE FUTURE
IF REINVESTMENT CAN BE CONTROLLED
- * NEW PROJECTS ON THE SLOPE ARE MARGINAL
ESPECIALLY IF EXPLORATION COSTS ARE
ALLOCATED
- * ALASKAN LEGISLATION LOOKS HARSHER FOR
THOSE NEW PROJECTS THAN ELSEWHERE
- * INCREMENTAL PROJECTS A LA HURL STATE
ANALOG LOOK BETTER IN ALASKA

LOOKS WORSE

...

DRAFT

C O N C L U S I O N S

- * THERE IS A NEED FOR MORE DIALOGUE BETWEEN
GOVERNMENT AND INDUSTRY NOT ONLY HERE**

- * ALASKA IS DISADVANTAGED BY COMPARISON
WITH OTHER OIL PRODUCING LEGISLATIONS
AS IT ONLY CONTROLS A PART OF TOTAL
TAXATION AND GAINS ONLY VERY INDIRECTLY
FROM EMPLOYMENT, SERVICES AND
MANUFACTURE OCCURRING IN THE LOWER 48**

DRAFT

C O N C L U S I O N S

- * BEING A CURRENT INVESTOR HELPS
SUBSTANTIALLY AND MITIGATES AGAINST
NEWCOMERS**

THIS IS TRUE JUST AS MUCH IN THE NORTH SEA

- * WHILE THE NEW FIELDS CAN LOOK ATTRACTIVE
WITHOUT EXPLORATION COSTS - THIS
DETRACTS FROM NEW EXPLORATION/OUTSTEP
OPPORTUNITIES**

- * THERE IS NO PANACEA**

SCOMM

63:3

**INTERNATIONAL
OIL TAX COMPARISON
STUDY**

**Prepared for
the Alaska State Legislature
and
the Alaska Department of Revenue**

April 1990

**INTERNATIONAL
OIL TAX COMPARISON
STUDY**

**PART I THE ECONOMIC ANALYSIS:
ALASKA, UNITED KINGDOM, NORWAY, INDONESIA, & AUSTRALIA**

by

**Alexander Kemp
David Rose**

Aberdeen University
Petroleum and Economic Consultants
Aberdeen, Scotland

and

Peter Gaffney

Gaffney, Cline and Associates
Energy Advisors
Houston, Texas
Alton, Hampshire, England

**PART II FINANCIAL AND OTHER ASPECTS OF OIL
INDUSTRY INVESTMENT**

by

H. Motamen Scobie

Chief Editor of "Energy Economics" and
"Economic Modelling"
London

ABOUT THE AUTHORS

Alexander Kemp and **David Rose**, the principals of Aberdeen University Petroleum and Economic Consultants, are widely regarded as the leading academic figures on economic rents and discounted cash flow analysis in the oil industry. They also do extensive consulting, primarily to governments. Among the numerous papers and books they have written (many jointly), Petroleum Rent Collection Around the World, the Institute for Research on Public Policy, Canada, 1988 has become a standard reference.

Peter Gaffney is a principle of Gaffney, Cline and Associates, energy advisors based in Houston, Texas and Hampshire, England. This is a premier firm in the appraisal of oil assets and oil prospects. Mr Gaffney, who grew up in an industry family, does some teaching in addition to his demanding consulting schedule. He has been on assignment to virtually every oil region in the world.

H. Motamen Scobie, a consultant to governments, oil companies, and the financial sector, comes from a background of teaching and international banking. Ms. Scobie is chief editor of two academic journals: "Energy Economics" and "Economic Modelling." Among her publications are Macroeconomics of North Sea Oil in the United Kingdom, Heinemann, London, 1983.

**INTERNATIONAL
TAX COMPARISON STUDY**

Prepared for

THE STATE OF ALASKA

AUPEC

**Aberdeen University Petroleum
and Economic Consultants**

GCA

Gaffney, Cline and Associates

April, 1990

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INTRODUCTION

The State of Alaska has undertaken a project to develop a model that will enable the State to compare the climate for investment in Alaska vis-à-vis other oil and gas provinces.

In the past few years a controversy has arisen between the oil industry and the State of Alaska. The Industry believes that its investors are not receiving a rate of return commensurate with the risks inherent in the exploration and development of new and existing fields. The State of Alaska contends that it is incumbent upon the State to pursue an aggressive oil royalty and taxation policy. The development of a comparative model is desired to increase the reliability of information available to the Alaska Legislature for use in the decision-making process in legislation on oil taxation.

The work was carried out under the aegis of a joint Senate/House Committee under the chairmanship of Senator Bettye Fahrenkamp. The consultants were selected in such a way as to represent a broad spread of expertise in the industry. Meetings were held with the Committee in Anchorage in November and in Juneau in January, at which the key questions raised by the Committee at their initial internal deliberations were addressed at some length. During the meetings and after subsequent work by the consultants the scope of the consultants' work was adjusted slightly to incorporate carrying out the actual tax comparisons in conjunction with the Revenue Department.

Four key Alaskan fields were chosen. It was decided to model historical Prudhoe Bay as well as to forecast its performance, together with hypothetical developments at the West Sak, North Star and Niakuk discoveries. The performance of an incremental project at Prudhoe Bay was also examined.

In addition to meetings with the Committee, extensive discussions were held with the Revenue Department and various tax models from other jurisdictions were made available. The Revenue Department prepared the four field economic cases under the Alaskan legislation and worked with the consultants to ensure the model would provide a framework for future ongoing work by the Department. Legislative comparisons were made with the UK, Norway, Indonesia and Australia. The study was carried out by, in effect, translating these four legislations to Alaska and examining the economic performance of the Alaskan fields as though that legislation had been in place

in Alaska. The models used included provisions to examine, among other things sensitivity to oil price, costs, exploration programs, and differences between current and new investors.

The State of Alaska has requested the consultancy Gaffney Cline and Associates (GCA), in co-operation with AUPEC (Aberdeen University Petroleum and Economic Consultants), and Dr. Motamen Scobie, Economic Consultant, to prepare a report covering the methodology and results of the comparative modelling.

The division of work was as follows:

AUPEC Group

Professor Alex Kemp and David Rose, AUPEC, carried out the cashflow/country model computer runs.

GCA

GCA was to be an arbitrator of fairness in the analysis and be responsible for the reporting and also for the inclusion of the prospectivity analysis.

AUPEC and GCA worked together to select relevant criteria and to assess the validity of comparisons.

Dr. Motamen Scobie

Dr. Motamen Scobie was to examine the financial aspects of comparative legislation in terms of investor credibility, and was to review other legislations not included in the current group. Dr. Motamen's work is the subject of a separate presentation.

Department of Revenue

The oil group of the Department of Revenue carried out the historical and forecast assessment of the Prudhoe Bay field together with forecasting the performance under Alaskan legislation of the three new Alaskan fields which were to be considered. All base data for the Alaskan modelling were provided by the Department, and the

Department worked with the Consultants to ensure a compatible and appropriate comparison. The basic field data provided by the Department provided the base data for the comparisons.

A draft report was presented in mid March to the Committee and at separate meetings to the Senate Finance and House Finance Committees in addition to a discussion with Industry.

Although the industry was most helpful in general no direct information regarding for instance specific development plans or allocated exploration expense or their appropriateness was made available directly to consultants in time to be incorporated.

The following presentation reflects the work of AUPEC and GCA in this phase of the study. It was not the intention of these comparisons to mirror the industry's exact performance as each company will handle its tax arrangements differently and they will, indeed, be in a different position. The attempt was to try and compare on a "reasonably level playing field" how particular projects would have looked if they had been carried out in Alaska under different tax legislation environments.

Insufficient time was available to adequately cross check the material validity of the hypothetical development plans or to assess the impact of a realistic incremental project on Prudhoe Bay. With the current results to hand it would also be prudent to ensure that the base case Alaska cashflow analysis was also carried out under the same identical system as the comparison fields to ensure more complete compatibility. In these senses the work should be considered preliminary.

Nevertheless recognising that the original objective of this work was to set up a 'model' with which to make comparisons, a basic approach has been selected, models made available and a first pass of comparisons carried out.

Acknowledgements

The not inconsiderable help of the Revenue Department in Anchorage, the Revenue Commissioner's Office in Juneau and the Committee members and their staff is acknowledged. We are also grateful for material provided by industry and the opportunity to see the North Slope operations on site. No multiple organisation operation of this type works without cooperation and that cooperation provided by both State and Industry made possible the completion of this study.

SUMMARY OF RESULTS

Broad comparisons are possible and useful. While these comparisons show that both the State and the companies did well from Prudhoe Bay they do not necessarily suggest that the State could have done much better as the returns under all the other legislations which were not designed for a Prudhoe Bay sized field appear punitive.

The comparisons do show the new projects on the North Slope are marginal especially if sunk exploration costs are included. These projects look better especially under the U.K. and Norwegian systems, of course, the field sizes are more in line with the size of fields more typical of the North Sea region, so these comparisons are reasonable.

Being a current investor helps substantially and all the new projects look much worse from a new player's point of view.

It is important to stress that unlike other countries Alaska is disadvantaged as it only controls a part of total taxation and gains only very indirectly from employment, services and manufacture occurring in the lower 48.

In examining the many subjective perceptions that drive investments in the industry, it is clear that Alaska's image is one of being more difficult in many respects than the other countries concerned. Indeed the perceptions are reinforced by the results of the new projects mentioned above.

In summary we have answered a number of the initial questions raised by the committee including the usefulness and methodology of making some comparisons.

We have provided a framework for comparison and provided model capability. The first phase of model comparisons has been completed and some comments on the Alaskan legislation relative to other legislations have been made. Some observations have also been made on how in very general terms it might be possible to achieve one or more of a series of potential goals if these goals were indeed the State's objectives.

RESULTS OF COMPARISONS

Method of Approach

In order to present effectively and concisely the results of what amounts to a large volume of information, it has been necessary to adopt a summary approach in the following presentation. Full details of the economic analysis have been made available to the Department of Revenue. Essentially the key comparative components are shown on the attached graphs with a brief written summary of the results.

The basic analysis has consisted of establishing the value of each project by calculating the Net Present Value (NPV) on a 12.5% real basis (17% nominal), a measure of the size of each project in each country. This was carried out for both the company and government share.

Among other factors considered were:

Internal Rate of Return (IRR), a relative measure of return on investment, typically we would expect projects to stand some chance of proceeding if rates of return were at least 10% (real) or about 15% nominal.

Payout from initial development, a measure of how long the total funds were exposed.

Prospectivity, a series of very subjective judgements on the relative attraction of a Country for investment.

In addition, the sensitivity to changes in oil price, costs and the impact of exploration costs were also examined together with the effect of being a new investor as apposed to an existing one with tax sheltering capability.

The base case factors were as follows: real discount rate 12.5% (equivalent to a 17% nominal rate), oil prices US\$14.50 per barrel for Prudhoe wellhead, prices adjusted for quality and transportation for other fields, and inflation of 4.5% p.a. The base case also assumed an existing investor and takes account of some of the allocatable sunk past exploration costs. The Prudhoe Bay field was examined through its history and appropriate inflation rates were used for the prior period.

Net Present Value (NPV)

Net Present Value is an approach to illustrating the worth of a project after taking into account the time value of money. Typically the oil industry uses this approach to get a true idea of the value of the project and to compare the project with others. In carrying out our analysis we first brought past costs forward, using the US inflation rates of the day, so that \$1,000 spent 10 years ago in a particular country might represent the equivalent of \$2,000 today. Similarly, in examining future income, \$1,000 received ten years hence might be worth only \$500 today.

Next, we have to discount the stream of net income - to allow comparisons with other projects and give a yardstick as to how far above or below we are from our minimum return. The discounts applied to obtain Net Present Value in oil are commonly in the range of ten to fifteen percent above inflation. However, from time to time, financial institutions, in particular, may use higher percentage discounts in order to try and use the discounting approach to assess some sort of project related risk. For our purposes we have chosen a medium 12.5% real discount rate (i.e. 17% if there is 4.5% inflation) for the base case valuations but have also examined the projects at discounts of 10% and 15% in the detailed results which have been made available.

It is also clear that even a very large project which is carried out long into the future and evaluated with a high discount rate might have a very low Net Present Value. On the other hand a very small successful project occurring in the near future and evaluated perhaps with the same discount rate might appear to be a much more attractive project.

Net Present Value is a good indicator of project size but it in fact gives no indication of duration. Project payout on the other hand is a good indication of how long funds are at risk from the point of major investment but gives no indication of return on investment or project size. Rate of Return gives an indication of project success but no indication of timing or size.

While there are many performance criteria we can use in the interests of simplifying the results, we have limited our analysis to comparing the government and company Net Present Values, in real dollars, Internal Rate of Return in % terms and payout in years for each field, for each of the five legislative scenarios.

In order to present the most meaningful comparisons on the graph, anomalously high values have been capped. This is shown by the value of the bar being fully extended to the margin of the graph at its maximum or minimum value.

Company Net Present Value (NPV at 12.5%) Results

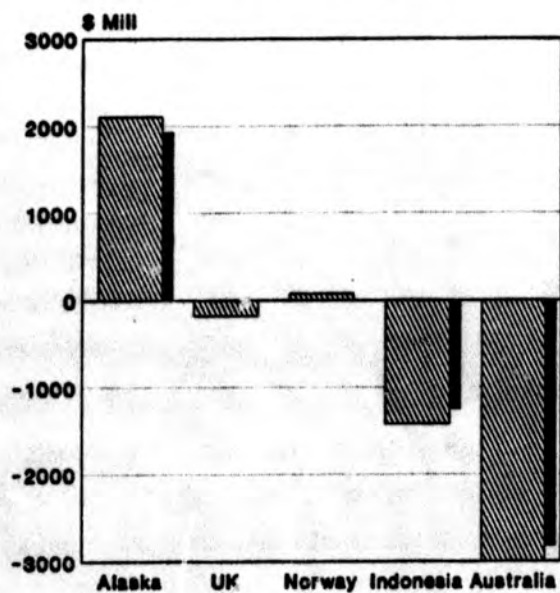
Company NPV for Prudhoe Bay is higher under the Alaskan legislation than under any others but it is unlikely that development could have proceeded under the Indonesian and Australian legislations. Note that this analysis looks at Prudhoe Bay as of 1975 - all other analysis uses 1990.

The remaining Net Present Value of Prudhoe Bay was also examined under each legislation in 1990 terms. This remaining NPV analysis does not include all likely necessary new investments typical of such situations and probably overstates the company position.

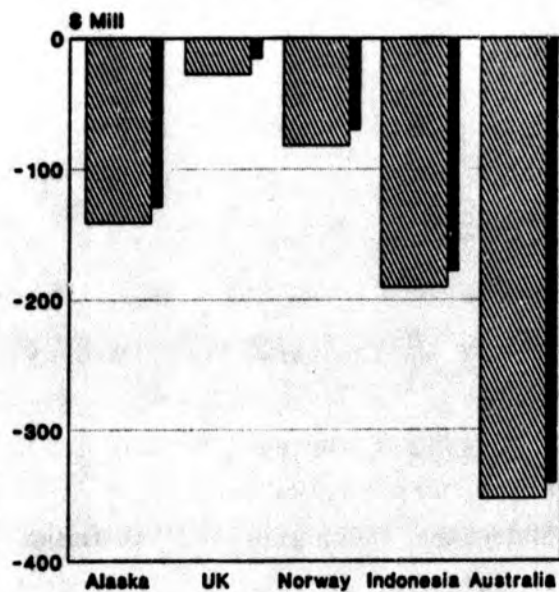
The remaining Prudhoe Bay Net Present Value is shown separately comparing government and company shares at zero discount and at the standard 12.5%. On the bar chart showing the relatively high remaining U.K. government NPV it must be remembered that while the marginal tax rate is very high, the U.K. allows offset of very significant exploration and some development costs against current production taxes.

For the other three fields only Niakuk in the U.K. appears positive, indeed all three fields would do better under both U.K. and Norwegian legislation. The high front end exploration and the low effective oil price make these projects all look unsuccessful under Indonesian and Australian legislation as these legislations are particularly geared to higher oil price regimes. Removing exploration costs, of course, makes all three projects look better and indeed viable in the model cases under some legislations.

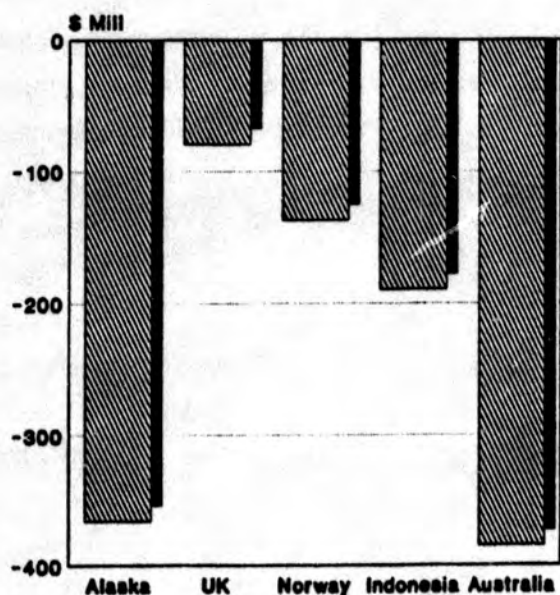
COMPANY NPV \$ REAL
Prudhoe Bay
Base Case at 12.5%



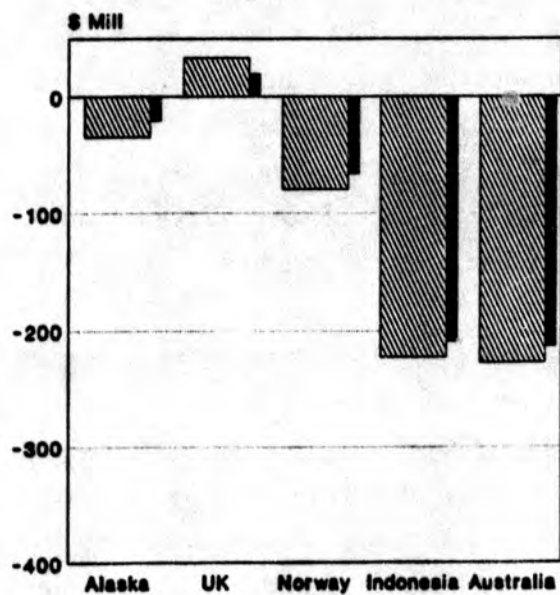
COMPANY NPV \$ REAL
West Sak
Base Case at 12.5%



COMPANY NPV \$ REAL
North Star
Base Case at 12.5%



COMPANY NPV \$ REAL
Niakuk
Base Case at 12.5%



Government Net Present Value (NPV at 12.5%) Results**Prudhoe Bay**

Apart from Australia where the revenues would have been so high as to negate the project, Alaska appears to have received somewhat less present value from the project than if the project had been under the other three legislations. Timing of revenues affects this type of analysis as funds received later will be worth less when present valued back to 1975 as was done in this case. Note that Prudhoe Bay government NPV shows the split between State and Federal taxes.

West Sak

Government NPV's look good in all cases except U.K. but the project is marginal from an investment point of view.

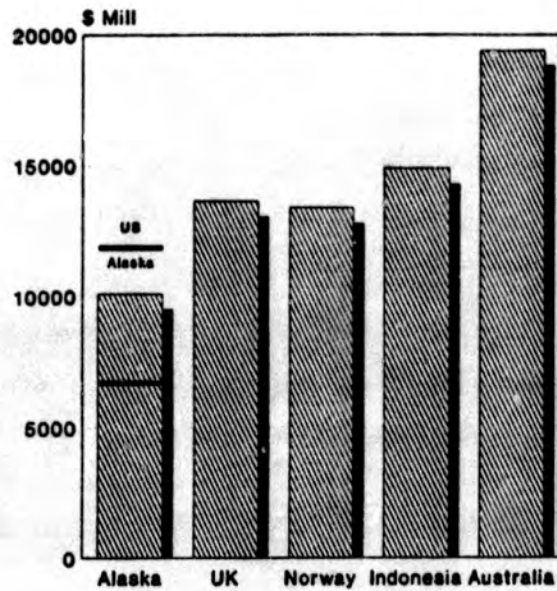
North Star

This project which is marginal appears to have a positive government NPV only in Alaska suggesting that, by comparison, it would be treated more favourable elsewhere.

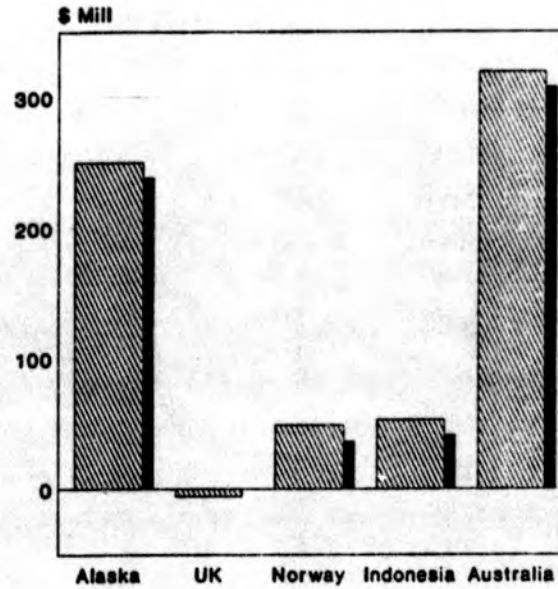
Niakuk

As in North Star, Alaska government's NPVs are much higher and indeed positive.

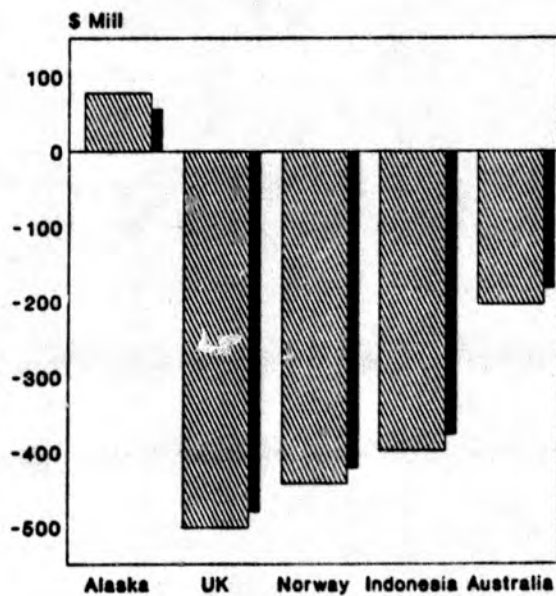
GOVERNMENT NPV \$ REAL
Prudhoe Bay
Base Case at 12.5%



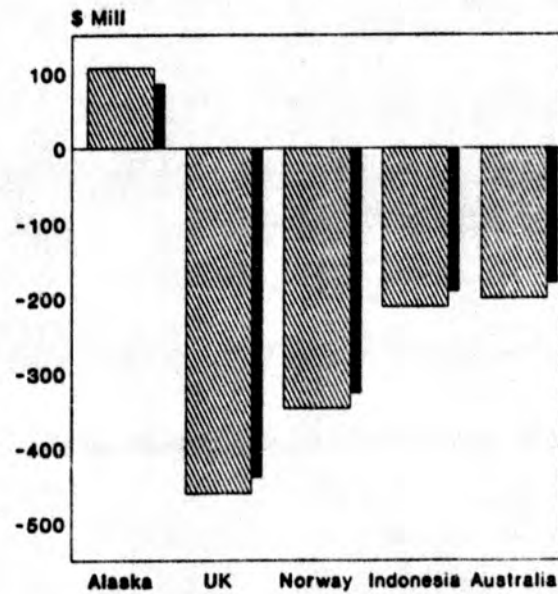
GOVERNMENT NPV \$ REAL
West Sak
Base Case at 12.5%



GOVERNMENT NPV \$ REAL
North Star
Base Case at 12.5%



GOVERNMENT NPV \$ REAL
Niakuk
Base Case at 12.5%



Company and Government Prudhoe Bay NPV and Government Take - Various Discounts

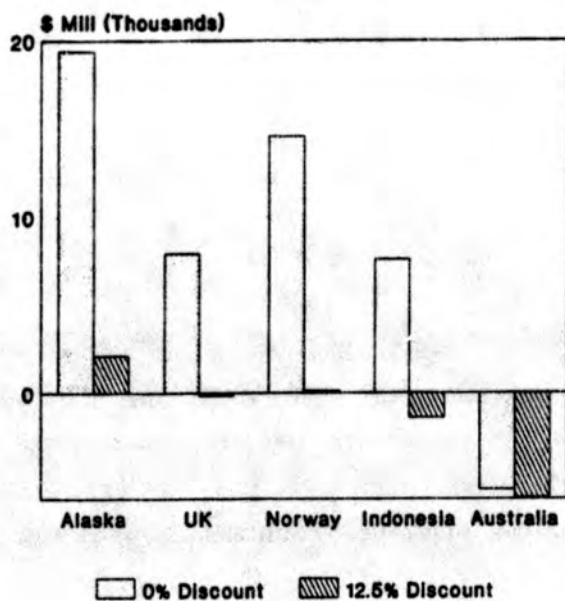
The following charts illustrate Prudhoe Bay Net Present Value from a government and company view based on different discount rates.

The government chart also shows the split between State and Federal taxes for Prudhoe Bay.

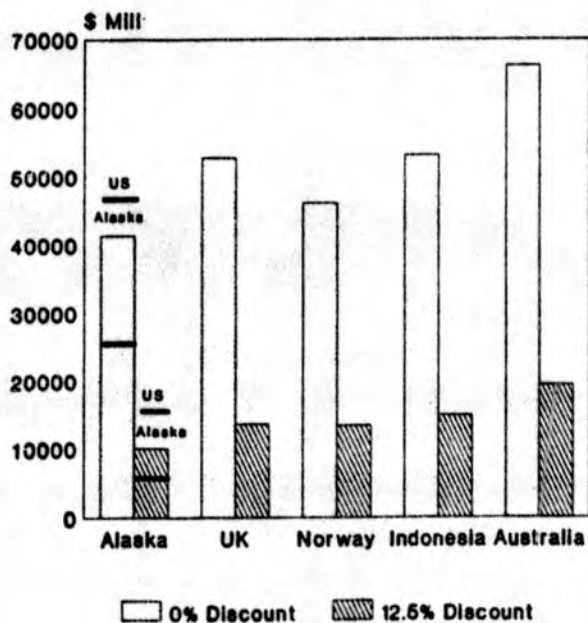
The government take chart shows the percentage government take for Prudhoe Bay over and above a 12.5% discount.

In Alaska this is just over 80% rising to over 100% for the other legislations. In other words this represents the percentage of what is referred to as the Economic Rent which is taken by the government. It can be seen that at 12.5% the take would be unreasonably high in all other countries giving grounds to the concept that their legislation was not geared to a Prudhoe Bay field.

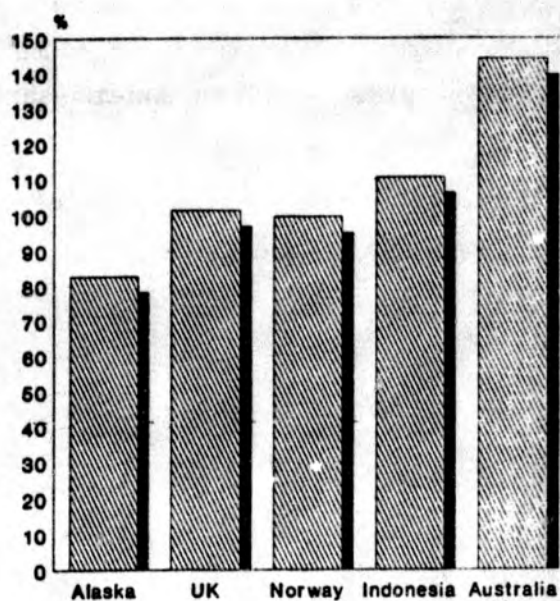
COMPANY NPV \$ REAL
Prudhoe Bay
Base Case Varying Discount



GOVERNMENT NPV \$ REAL
Prudhoe Bay
Base Case Varying Discount



GOVERNMENT TAKE %
Prudhoe Bay
Base Case at 12.5%



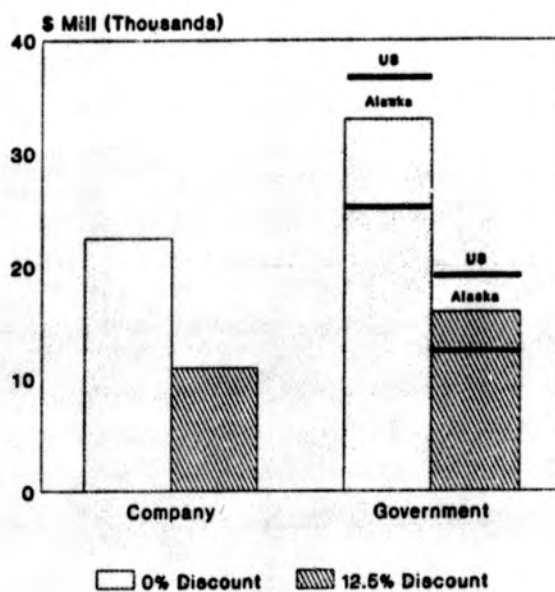
Prudhoe Bay Remaining Net Present Value (1990)

The remaining Net Present Value of Prudhoe Bay was also examined under each legislation in 1990 terms. This remaining NPV analysis does not include all likely necessary new investments typical of such situations and probably overstates the company position.

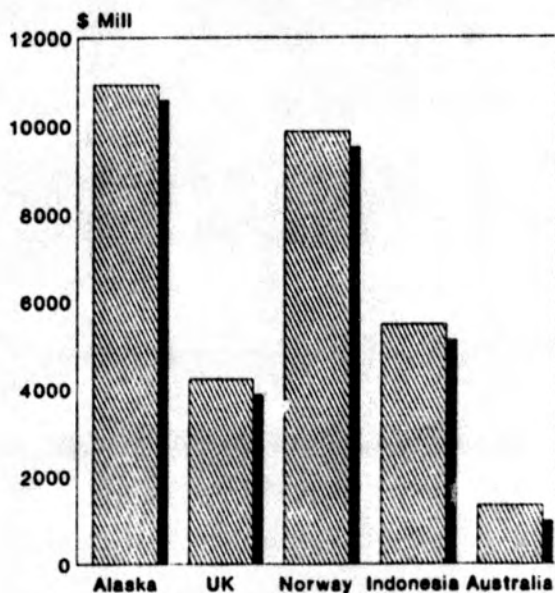
The remaining Prudhoe Bay Net Present Value is shown separately comparing government and company shares at zero discount and at the standard 12.5%. On the bar chart showing the relatively high remaining U.K. government NPV it must be remembered that while the marginal tax rate is very high, the U.K. allows offset of very significant exploration and some development costs against current production taxes.

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REMAINING NPV COMP+GOV Prudhoe Bay- Alaska Base 1990\$ Varying Discount



REMAINING NPV COMPANY Prudhoe Bay Base Case 1990 \$ at 12.5%



Rate of Return (ROR) and Internal Rate of Return (IRR)

These are measures, typically quoted as percentages, of the amount of the investment which is recovered on an annual basis. Thus if we invest \$100 and get \$10 back within a year this might be referred to as a 10% return.

Internal Rate of Return is more typically used in the oil industry. It is the percentage rate of return which could still be achieved if the project was to only break even, i.e. the rate of return at which the Net Present Value (NPV) of a project is zero. Rates of Return are excellent comparative tools but they give no indication of size or duration of the project. Thus a very small investment with a correspondingly small Net Present Value might have a very high Rate of Return. Correspondingly, a very large project with a very large NPV could also have a very small Rate of Return. It is important to stress that these performance measures cannot be considered in isolation, and a series of the various project performance tools must be used.

For rate of return purposes, only positive Internal Rate of Return (IRR) values were shown so that the lowest value in the rate of return is zero. Negative IRR values can be misleading.

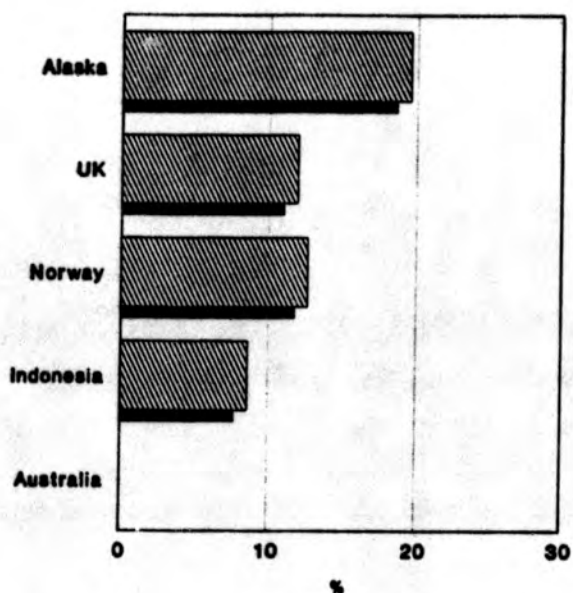
Internal Rate of Return Results

Prudhoe Bay IRR% is higher in Alaska than in all the other countries. This is partially so because other countries tightened their legislation significantly as prices rose in the late Seventies/early Eighties. Indeed the U.K. was at its most aggressive with high rate Petroleum Revenue Tax (PRT), Supplemental Petroleum Duty (SPD) and Advanced Petroleum Revenue Tax (APRT) payments all occurring in the late Seventies and adversely affecting the early production of Prudhoe Bay under that simulated legislation.

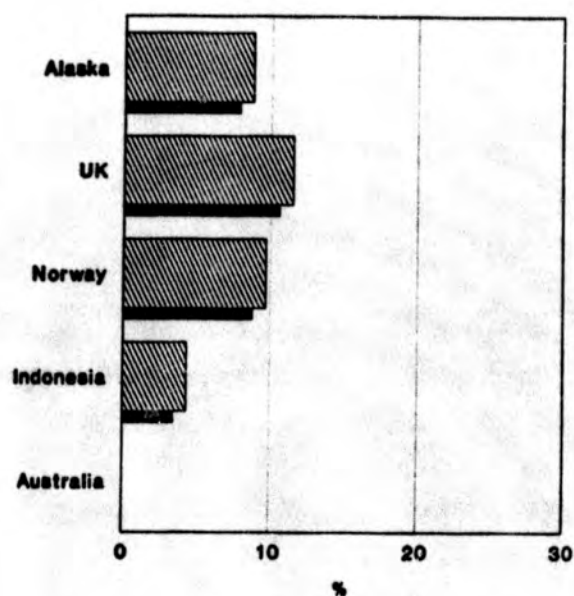
All three new fields look better under U.K. legislation, while North Star only has a positive rate of return under U.K. and Norwegian legislations.

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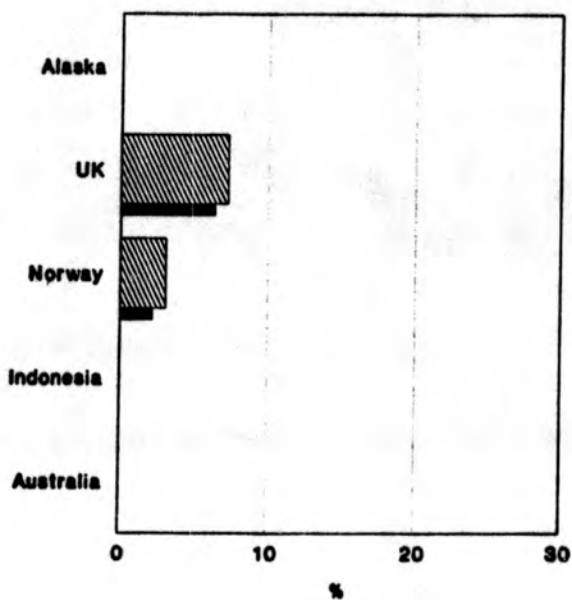
COMPANY IRR % REAL
Prudhoe Bay
Base Case



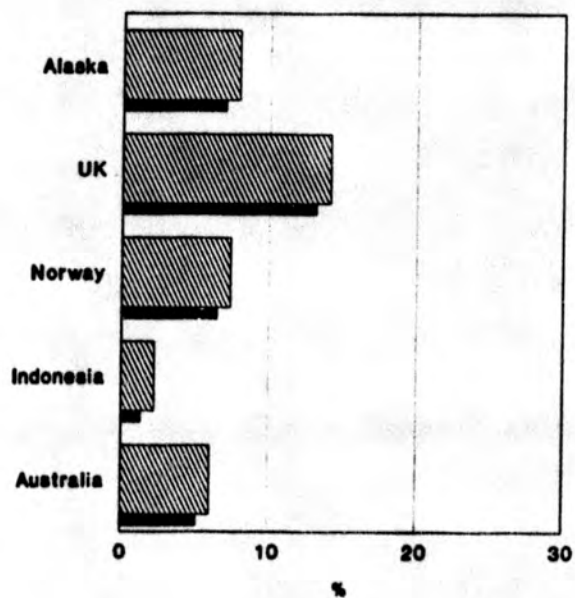
COMPANY IRR % REAL
West Sak
Base Case



COMPANY IRR % REAL
North Star
Base Case



COMPANY IRR % REAL
Niakuk
Base Case



Years to Payout

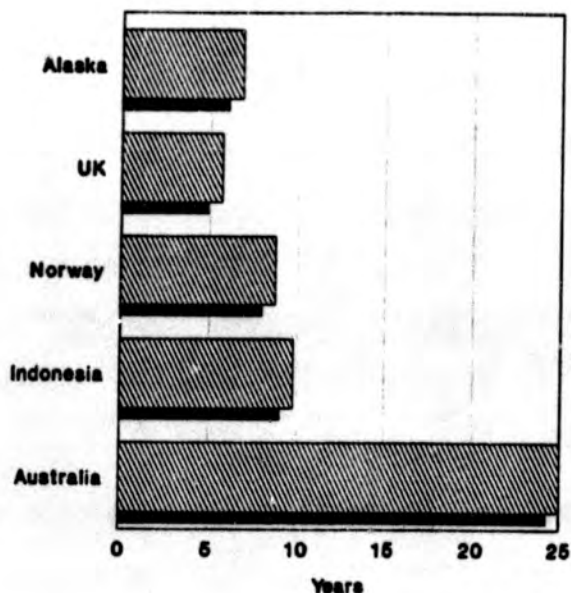
This is defined as the time required to recover the original investment including a full exploration program.

How soon payout was achieved from the beginning of each of the projects at the development stage was examined. It should be noted that payout, of course, would take rather longer if the period from the beginning of the exploration stage had been taken; but payout as calculated does incorporate repayment of the inflation- adjusted exploration costs no matter how long ago they had been expended.

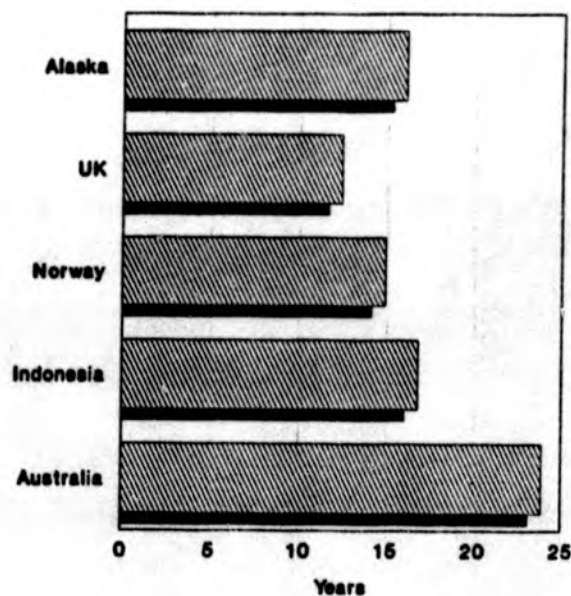
Years to Payout Results

Prudhoe Bay would have paid out sooner under U.K. legislation but Alaska, Norway and Indonesia were all of the same order of magnitude. North Star and Niakuk payout earlier under U.K. legislation.

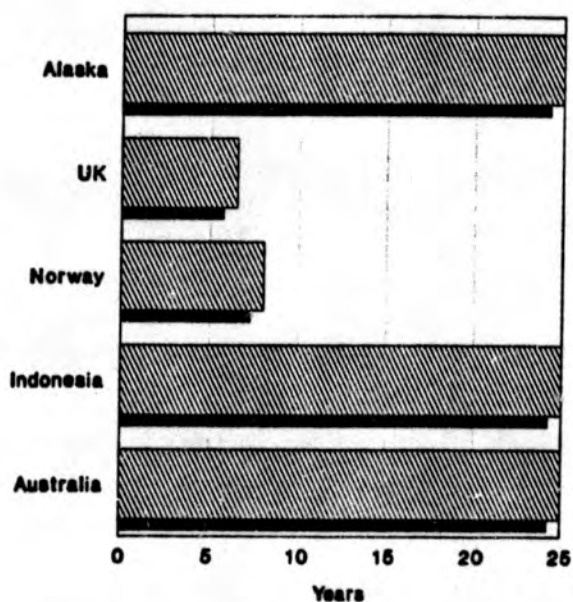
YEARS TO PAYOUT Prudhoe Bay Base Case



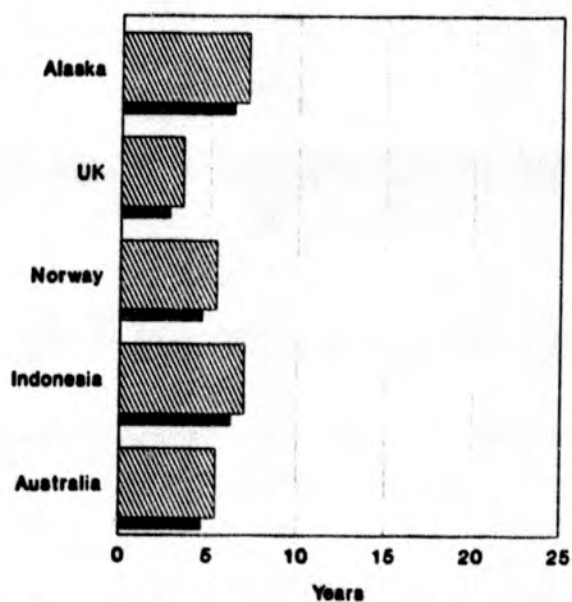
YEARS TO PAYOUT West Sak Base Case



YEARS TO PAYOUT North Star Base Case



YEARS TO PAYOUT Niakuk Base Case



Net Present Value for Incremental Prudhoe Bay Project

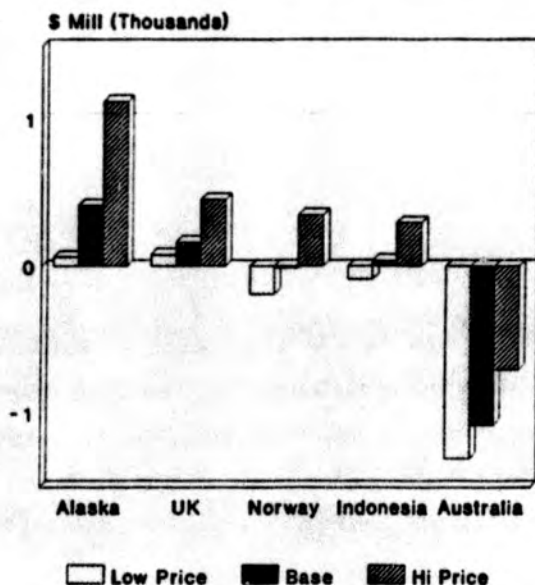
We have examined for Prudhoe Bay, in each legislative scenario, the impact of a late-life incremental project (i.e. additional reserves, additional revenues and additional costs) on the Net Present Value of the overall project.

Net Present Value for Incremental Project Results

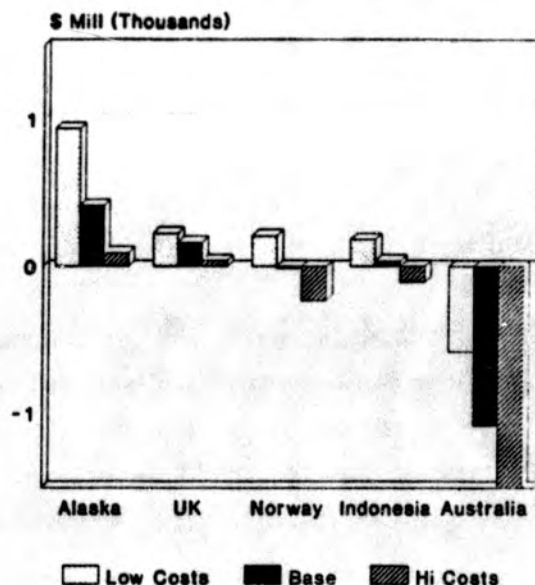
The incremental project (Hurl State Analogy) looks better under Alaska legislation than it does under any of the others.

However, this incremental project was a Hurl State Analog and insufficient time was available to evaluate its appropriateness as an incremental project. Indeed it is clear that it does not adequately simulate some likely aspects of typical late life field investments and costs.

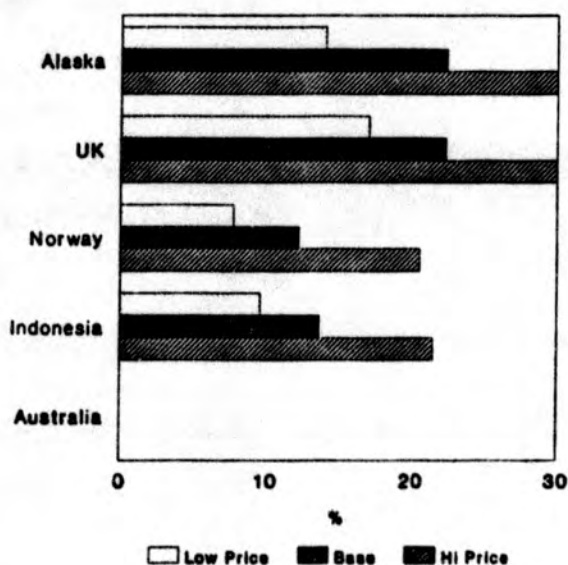
**COMPANY NPV \$ REAL
Prudhoe Bay Increment
Sensitivity to Oil Price**



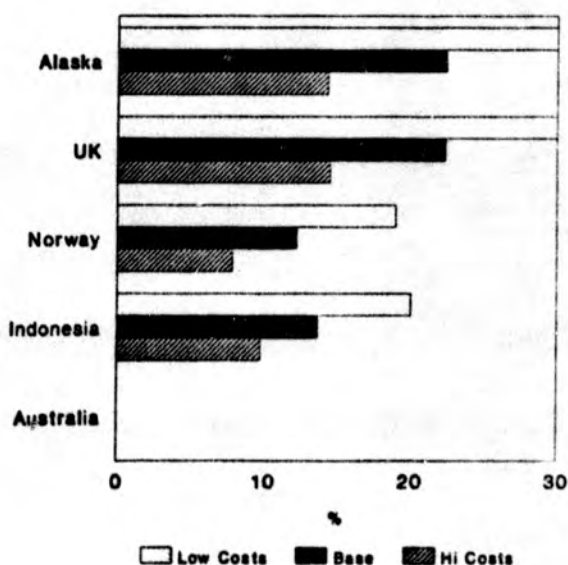
**COMPANY NPV \$ REAL
Prudhoe Bay Increment
Sensitivity to Costs**



**COMPANY IRR % REAL
Prudhoe Bay Increment
Sensitivity to Oil Price**



**COMPANY IRR % REAL
Prudhoe Bay Increment
Sensitivity to Costs**



Prospectivity

It is well recognised within the industry that decisions are made on the basis of more than just the previously mentioned economic criteria. It is the combination of criteria that allows proper assessment of the opportunity. No one company at any one time will be driven by the same influences or use the same performance yardsticks yet, from time to time, the industry as a whole may rush to a new or revitalised area, for instance, offshore China in the early 1980s.

Companies which want to invest in exploration have to perceive that the geological prospects are good and that the combination of resources and technology available to them make it possible for them to expect economic success.

Included among the key criteria in what we might generally call prospectivity is the perception of how good the geological prospects are, the size of those prospects, the logistics, costs, legislative and political environment, the time to do a deal, the time to get on production, the market, and what we might generally describe as the hassle factor. Of course, in addition to these are the availability of capital within the company and issues of pricing and costs which are largely taken care of in the economic analysis.

In reviewing the prospectivity charts one must accept that this is a subjective judgement made at a precise moment. Such an assessment will vary with time, with company, with prospect and with opportunity levels. The charts are given solely to give an idea of some of the factors which have a very real bearing on initial and reinvestments.

Geology

The geological prospects for oil or gas have to be reasonable.

Field or Opportunity Size

Large companies will rarely look in areas where the potential field size is very small. They have limited staff resources and their way of doing business is such that their costs will form too high a burden on small fields. For any given area the geological prospectivity will suggest the types of field sizes which might be possible. These field sizes

have to be large enough in the particular logistical and economic climate to be viable for the type and size of organisation that is investing in them.

Logistics

Difficult logistics, for instance in transport, environment, the lack of existing pipelines or a simple method of extracting the crude, will dictate that much larger fields have to be found to make the ultimate project viable. In such situations, longer periods of time are necessary and hence exploration funds are exposed at risk for a longer period. Poor logistics in combination with other marginal factors can lead to a company deciding not to invest. Good logistical factors are a major plus, for instance, in many parts of the North Sea.

Costs

There will be a perception of costs in each particular area. Major variations will depend among other factors upon the logistics, environment and the nature and depth of the potential prospects. If the operation is perceived extremely costly then naturally one has to be looking for larger fields. To the extent that costs are high this will tend to mitigate against the involvement of smaller, less adequately financed concerns and favour larger companies who can handle major longer term expenditures.

Legislative and Political Risk

Legislative and political risk is mainly a perception of potential change which might affect the company's ability to recover an investment. If the prospects and economic returns look good the industry frequently takes on board what are huge risks, investing in volatile legislative scenarios and where there may be very real potential risk exposure.

Time to Do a Deal

To many companies an important aspect is their perception of whether it would be possible to do a deal and get exploration acreage in a

reasonable finite period. How long will it take to obtain the opportunity in the first place? If the prospects are excellent and the perceived field sizes large, companies will be quite happy to wait around for years, all other things being largely positive. If, on the other hand, the current returns appear marginal they may be more inclined to be impatient and at the very least place the opportunity on the back burner.

Time to Get Production (Time to Product)

Smaller companies and indeed larger ones are frequently concerned about how long it will take once they have found production to get it on stream and begin to make a return. The nature of the legislation itself can define how fast they can make their return and these items are dealt with in the economic criteria presented elsewhere. If the combination of logistics, environment, location etc. indicate in the end a very long time to get production on stream, then this has a negative impact.

Markets

Availability of a market, particularly today for gas and also for instance heavy oil, can be a major factor in the timing and ability to carry out both exploration and development. With long lead-times, (exploration through to discovery and development) particularly in the more harsh environments, companies must make judgements on oil and gas prices and markets well into the future. To the extent that there appears some other element of market risk this will downgrade attractiveness of the project. To the extent that there appears to be no significant market risk, projects get upgraded.

Hassle/Pizzaz Factor

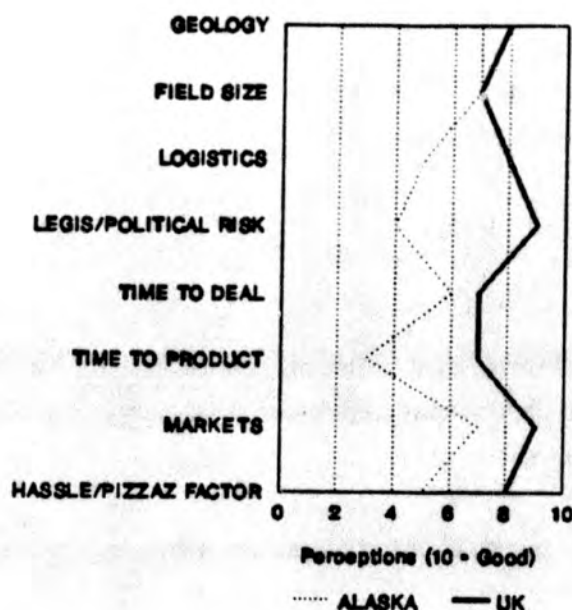
Industry is frequently driven, like any exploration-based natural resource concern, on what we might call the gold-rush concept. Is there a new place where a new series of large or even small discoveries appears imminent? Is there an old area we can revisit with new technology and do well? So from time to time we see the industry move

suddenly to new pastures where there is a perception of major new opportunity. The industry moved to the North Sea in the early 70s with successful results and moved to offshore China in the early 80s with very poor results. Regions and indeed countries become fashionable even though particular countries and environments may have large problems. Environmental aspects may cause substantial delays; there may be difficulties in getting expatriate staff in place or with approvals for the importing of equipment. There may even be concerns of terrorist activity. The combination of these makes up what we might generally refer to as the hassle and/or pizzaz factor. If there are high hopes and it is a fashionable area, the industry will frequently cope with quite exceptional circumstances. On the other hand if the prospects are less attractive, the industry is less inclined to invest in the first place.

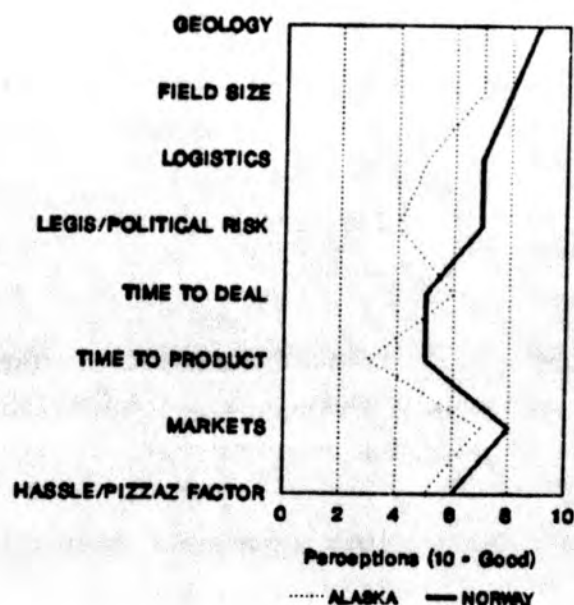
Prospectivity Results

Generally, Alaska looks less attractive under the scenario's examined at this "snap-shot" in time. Legislative/political risk appears higher in Alaska because among other reasons, the UK, Norway and Indonesia have all made material improvements in their legislation in more recent times. Recognising the subjective nature of the approach, overall Alaska appears similar to Norway and generally less attractive than the U.K. North Sea.

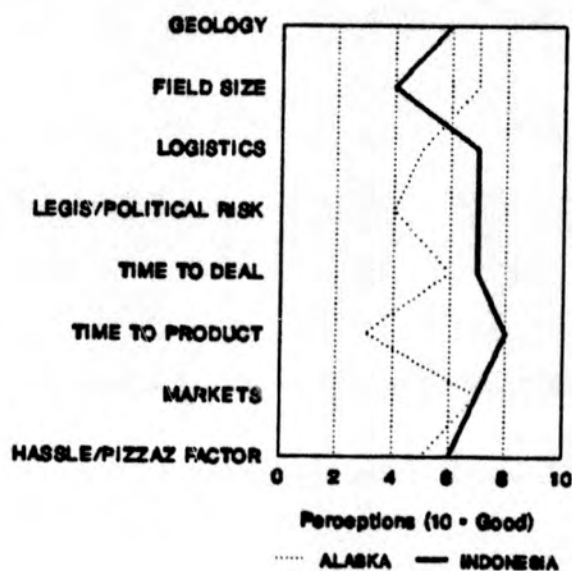
PROSPECTIVITY United Kingdom



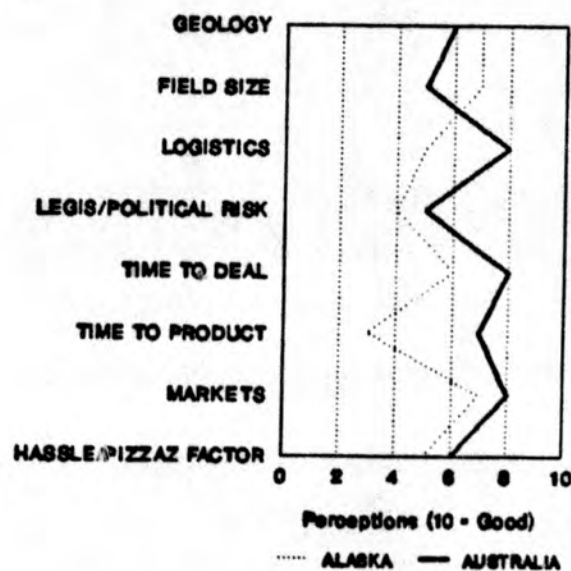
PROSPECTIVITY Norway



PROSPECTIVITY Indonesia



PROSPECTIVITY Australia



Sensitivities

Sensitivities to Prices

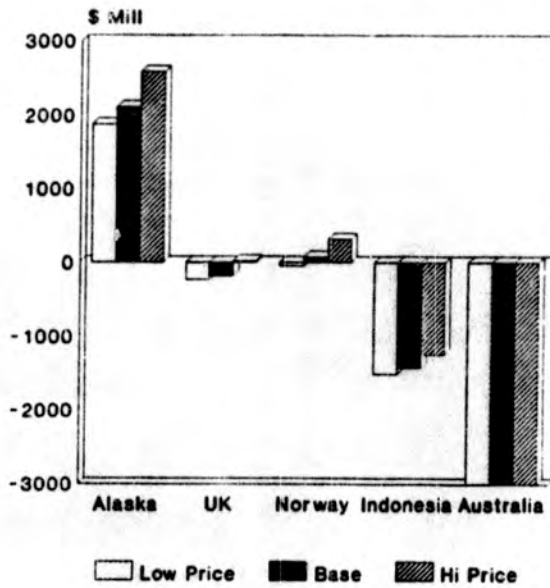
The following two pages of charts show the sensitivity to a high and low price, US\$3 down (US\$17/Bbl sale price) and US\$6 up (US\$26/Bbl sale price) from our base case (US\$20/Bbl sale price - US\$14.40 well head).

The sensitivity on the Net Present Value and on the internal rate of return is illustrated.

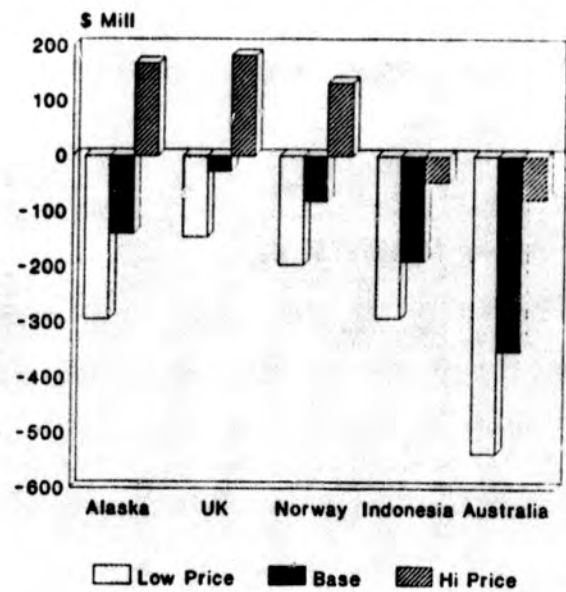
Prudhoe Bay historical rate of return is extremely insensitive to future prices when looking back from 1975. This is, of course, because a large part of the production is already at a market established price.

High prices put West Sak and Niakuk into a better looking scenario rate of return wise but only under U.K. legislation does North Star look to reach an even marginally acceptable internal rate of return. The rate of return on Niakuk demonstrates quite clearly the difference between the U.K. and Alaskan legislation, as even under a low price the rate of return is above 10% in U.K. versus 2% for Alaska. While under a high price the Alaskan return exceeds that in the U.K.

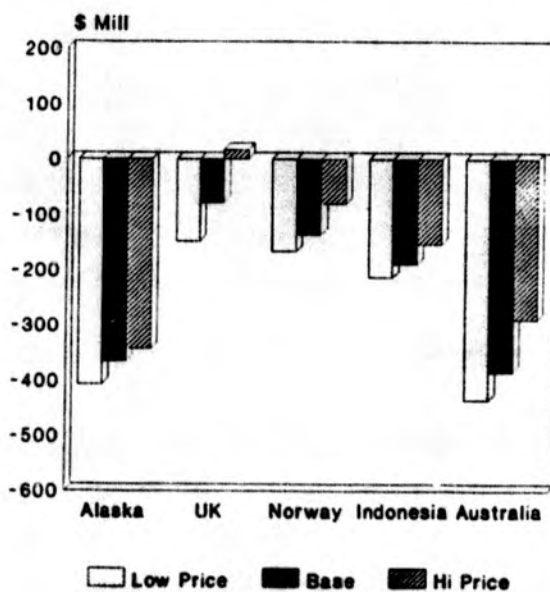
COMPANY NPV \$ REAL
Prudhoe Bay
Sensitivity to Oil Price



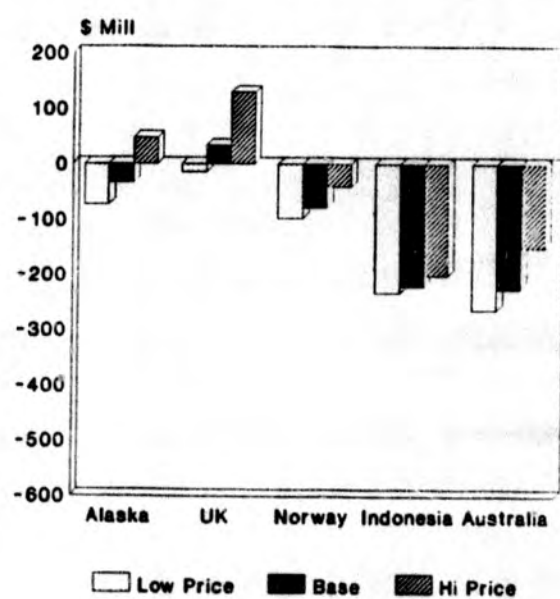
COMPANY NPV \$ REAL
West Sak
Sensitivity to Oil Price



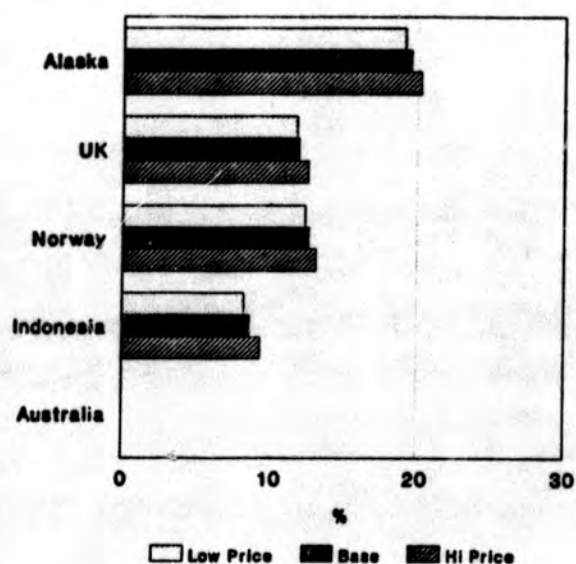
COMPANY NPV \$ REAL
North Star
Sensitivity to Oil Price



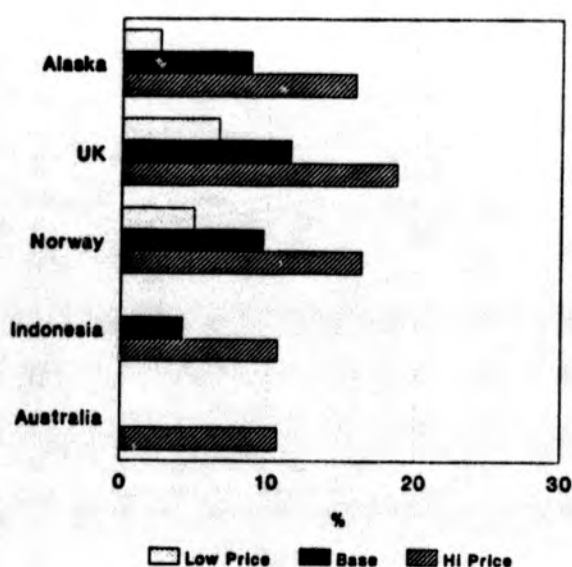
COMPANY NPV \$ REAL
Niakuk
Sensitivity to Oil Price



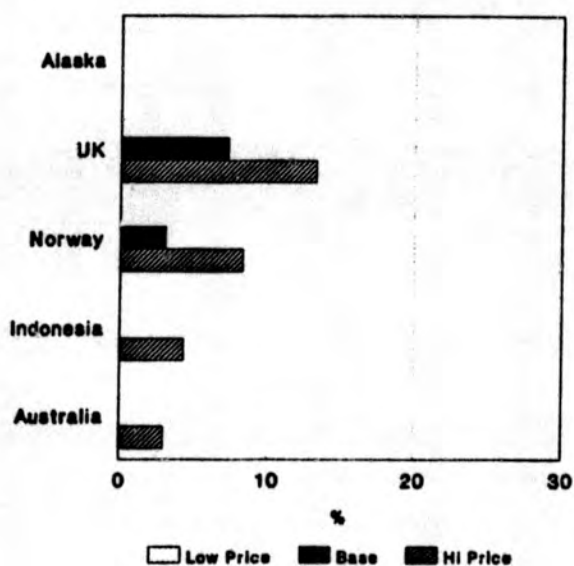
COMPANY IRR % REAL
Prudhoe Bay
Sensitivity to Oil Price



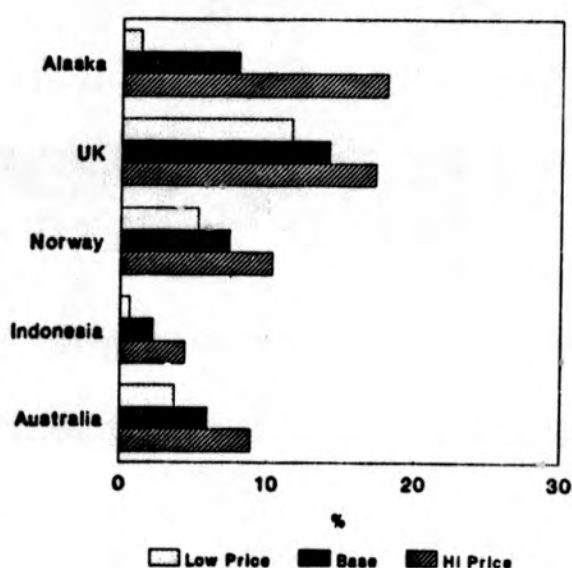
COMPANY IRR % REAL
West Sak
Sensitivity to Oil Price



COMPANY IRR % REAL
North Star
Sensitivity to Oil Price



COMPANY IRR % REAL
Niakuk
Sensitivity to Oil Price



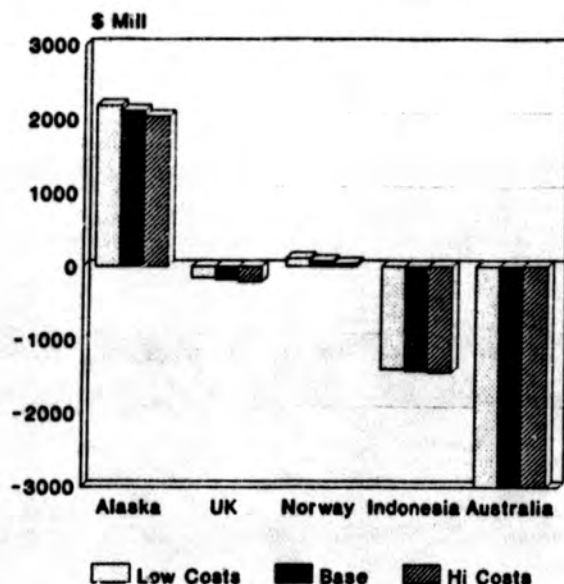
Sensitivity to Costs

The following two pages of charts show the sensitivity to a high (+25%) and low (-25%) cost scenario. The sensitivity on the Net Present Value and on the internal rate of return is illustrated.

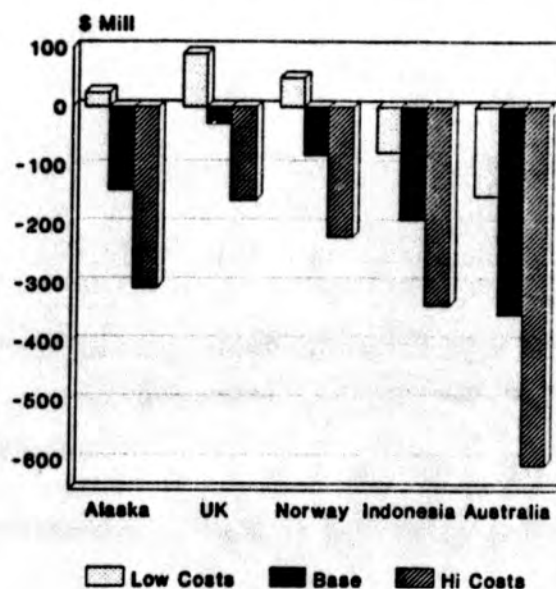
Again Prudhoe Bay is very insensitive to future cost changes when viewed from 1975. A low cost case makes West Sak and Niakuk look more attractive. Even North Star gets up in the range of potential investment consideration under U.K. legislation if costs can be reduced by 25%.

Sensitivity to costs is more marked in rate of return numbers in Alaska than say in U.K. or Norway.

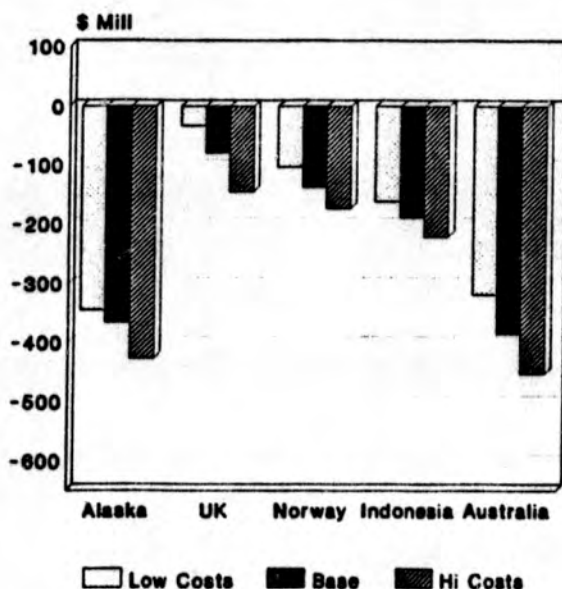
COMPANY NPV \$ REAL
Prudhoe Bay
Sensitivity to Costs



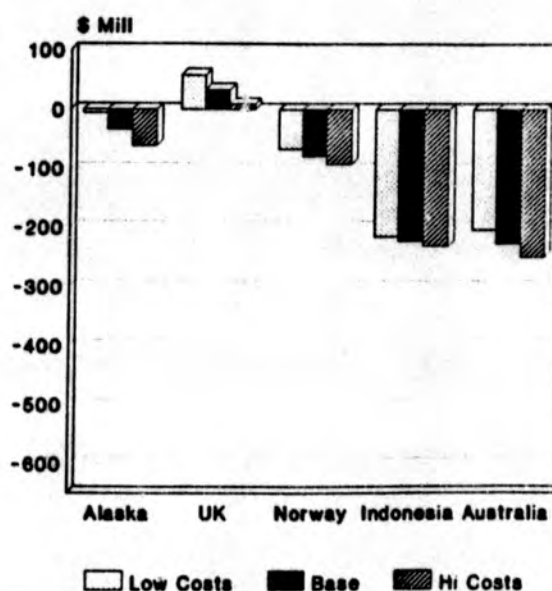
COMPANY NPV \$ REAL
West Sak
Sensitivity to Costs



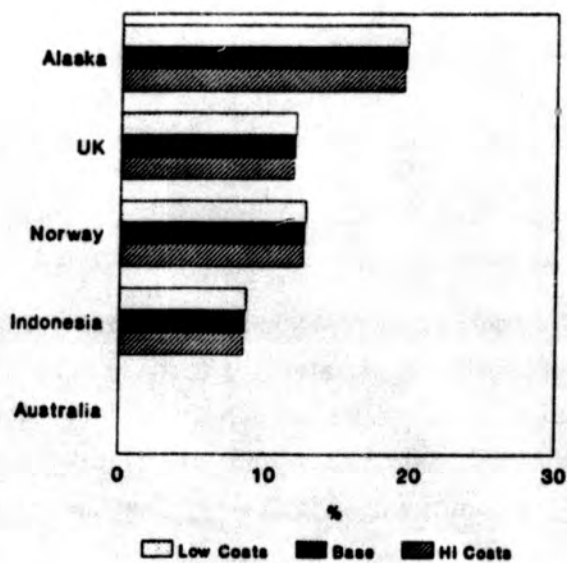
COMPANY NPV \$ REAL
North Star
Sensitivity to Costs



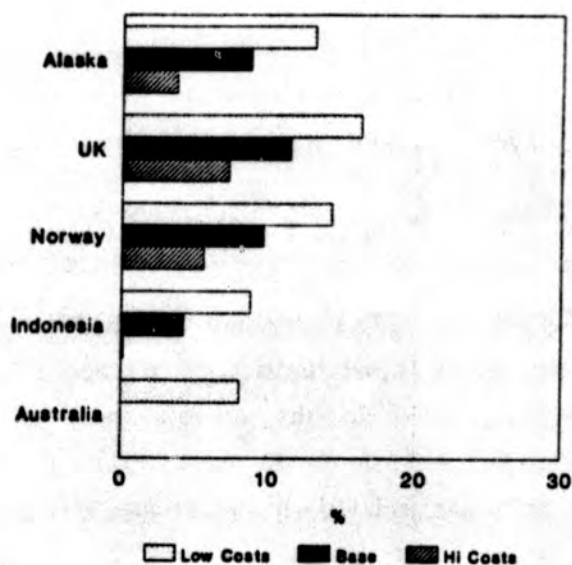
COMPANY NPV \$ REAL
Niakuk
Sensitivity to Costs



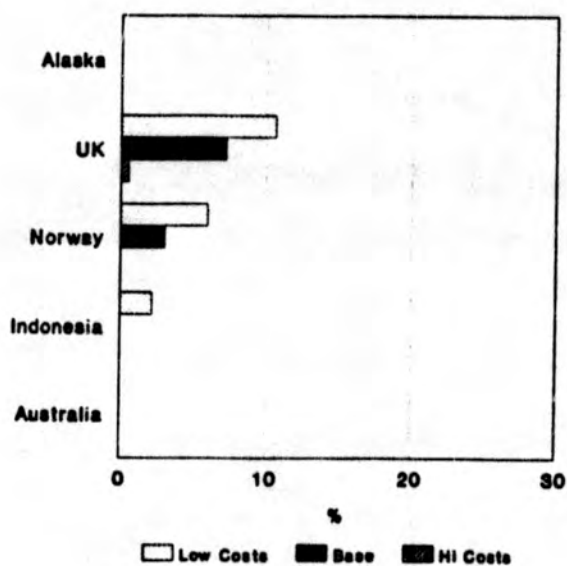
COMPANY IRR % REAL
Prudhoe Bay
Sensitivity to Costs



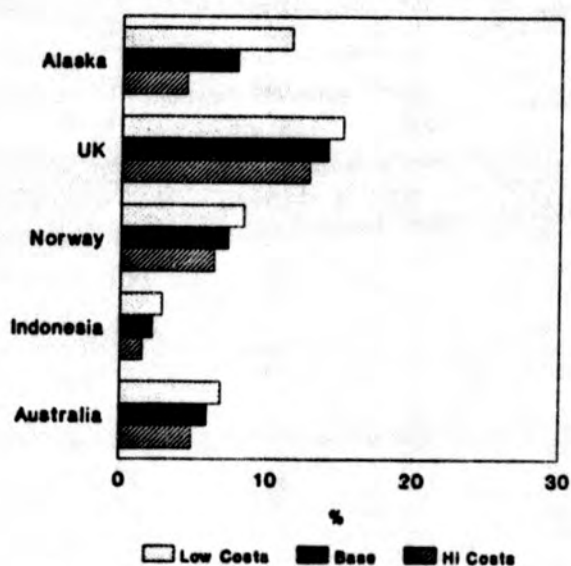
COMPANY IRR % REAL
West Sak
Sensitivity to Costs



COMPANY IRR % REAL
North Star
Sensitivity to Costs



COMPANY IRR % REAL
Niakuk
Sensitivity to Costs



Sensitivity to Exploration and New Investment

The following two pages of charts show the sensitivity to the sunk exploration costs on the Net Present Value and internal rate of return of the four fields.

Also shown on the same two pages is the effect of being a new player and not having the benefit of exploration write off against other projects.

Sunk Exploration Costs

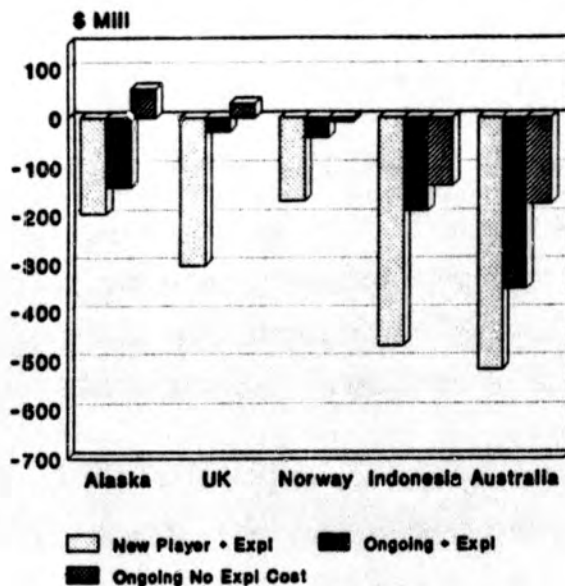
The decision to explore implies a commitment to later development of attractive opportunities. Unrecovered unsuccessful exploration effort has to be incorporated in the overall industry economics. So while a new area may look attractive from a development point alone the necessary front end exploration costs including related unsuccessful efforts must be considered in early assessments of going ahead on a new exploration venture. The exploration bill has to be paid somewhere.

Having made a discovery the analysis of the development economics may well take place without allocating sunk costs of exploration and development in the basic decision to proceed. However to the extent that such costs are not notionally recoverable against the project regardless of whether previously offset against past tax, the industry is simply cutting its losses rather than investing in a sensible project. It is clear that taking out the sunk exploration costs made Niakuk and West Sak especially more attractive projects.

New Player Versus Ongoing Investors

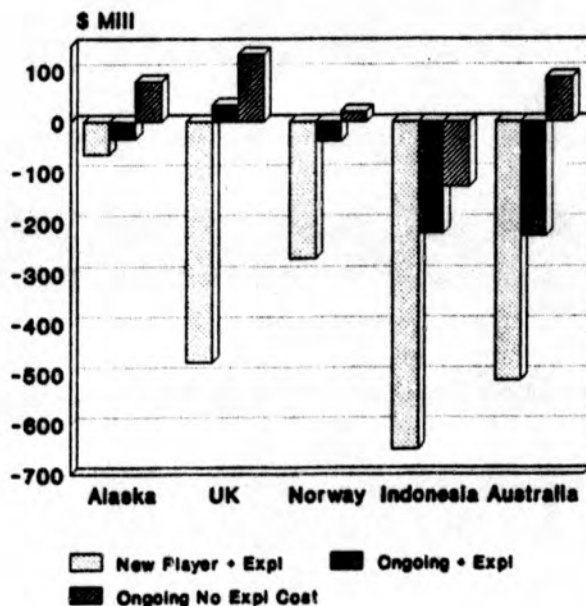
The impact of being a new player is also shown in the "Exploration" Sensitivity charts. As is to be expected, a new player would find the three new developments much less attractive than a current player, indeed none of the projects would look viable with the possible exception of West Sak.

COMPANY NPV \$ REAL West Sak Sensitivity to Exploration



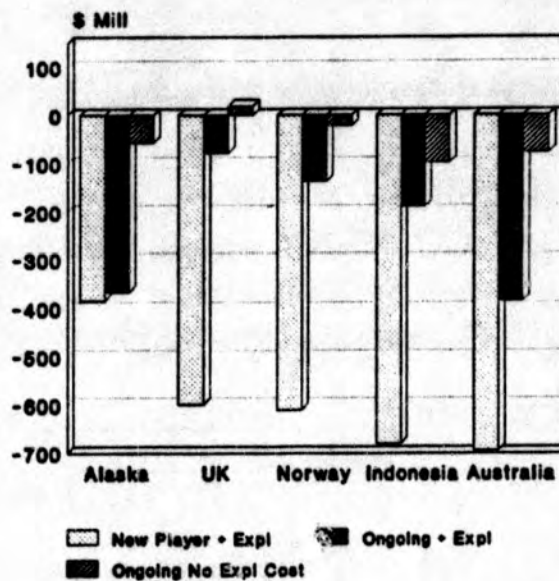
Ongoing + Expl Costs is Base Case

COMPANY NPV \$ REAL Niakuk Sensitivity to Exploration



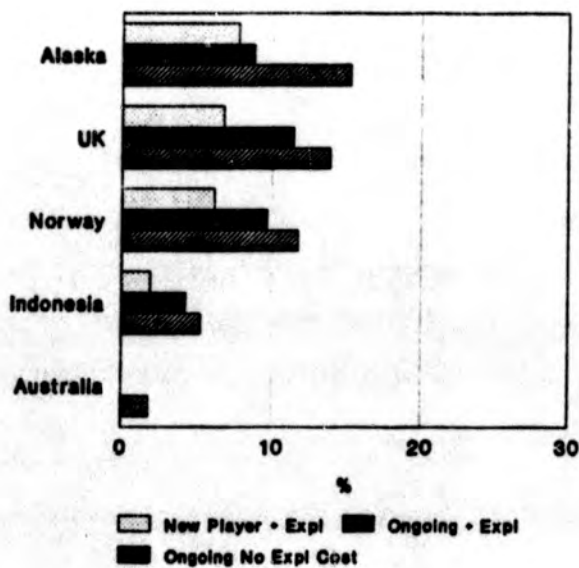
Ongoing + Expl Costs is Base Case

COMPANY NPV \$ REAL North Star Sensitivity to Exploration



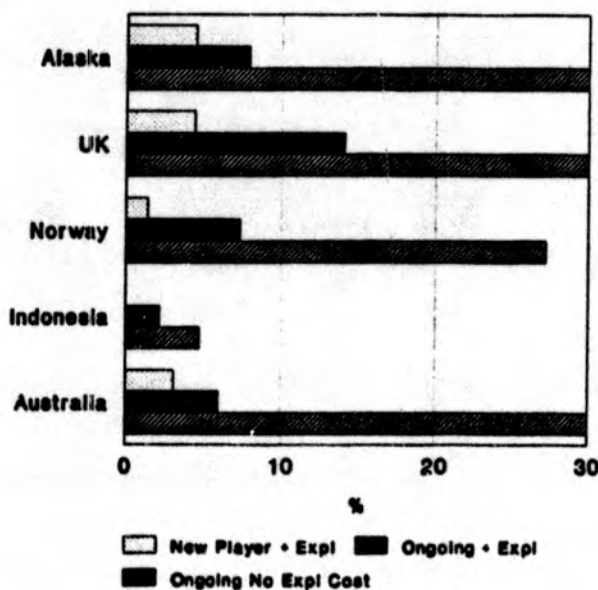
Ongoing + Expl Costs is Base Case

COMPANY IRR % REAL West Sak Sensitivity to Exploration



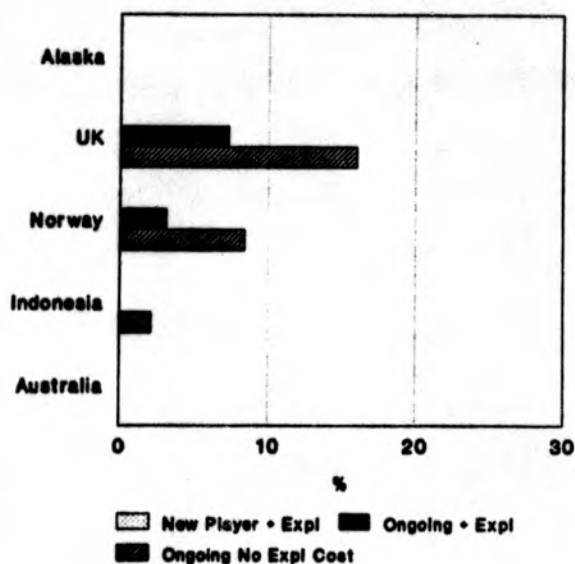
Ongoing + Expl Costs is Base Case

COMPANY IRR % REAL Niakuk Sensitivity to Exploration



Ongoing + Expl Costs is Base Case

COMPANY IRR % REAL North Star Sensitivity to Exploration



Ongoing + Expl Costs is Base Case

Encouraging Activity

Whether it be under concession arrangements such as in the United Kingdom or production-sharing agreements such as in Indonesia, these two governments have certainly used a pragmatic approach to adjust relative returns to the industry. This has been achieved by modifications to the contract conditions and/or to tax accounting guidelines. If encouraging exploration and development are objectives, the most successful approach has been that in the U.K. where the tax write-offs are significant enough to continue to encourage major exploration effort so that high marginal tax rates are offset by substantial exploration offset provisions. A similar, if somewhat more restricted approach, is taken under the Indonesian Production-Sharing Contract. Any government, of course must make a decision on the extent to which it wishes to encourage further exploration, investment in existing fields or new developments based relative to its need for current or longer term revenue from the industry, in addition to aspects such as employment and infrastructure which are critical in many jurisdictions.

While from a purely Alaskan view much of the employment and equipment manufacturing benefits may occur elsewhere, they do for the most part occur within the same government jurisdiction, i.e. the United States. Thus major projects, particularly on the North Slope or elsewhere, can have a significant impact in relative terms on the whole of the U.S. oil industry environment.

Certainly, governments in other countries have sought to encourage development and indeed domestic employment and domestic manufacture, but they are, of course, more concerned that such employment occurs within the country rather than a particular State. In the U.K., however, the emphasis has been more localised and significant efforts have been made to ensure that much of the offshore benefits accrue to Scotland.

Policy Goals

While the goal in Australia has been to maximise revenue the perception has been that prospects were not good for finding major new fields. In Indonesia while foreign currency and revenue were key issues the government has recognised a need to continue encouraging the industry for long term benefits of revenue, foreign exchange, employment and infrastructure.

In Norway the goal has been to maximise both revenue and local involvement and at the same time control development so as not to allow it to get out of hand.

The United Kingdom has pursued a varied policy over the last several years but overall it can be said to have wanted first to reduce or eliminate the oil deficit by encouraging exploration and development, then encouraging domestic industry with the resulting employment. Those two planks, maximising production and local involvement continue to be key driving forces, although it must be recognised that the U.K. marginal tax rate on large fields is one of the harshest in the world. This in turn is offset by generous exploration offsets to encourage further exploration.

How does the Government control industry in other countries?

The industry is largely controlled in most countries by a combination of the equivalent of a Ministry or Department of Energy and an appropriate Department of Revenue. Basically, the Ministry is responsible for issuing of new licences, exploration/production (the equivalent of lease sales), the approval of appropriate permits and for the general regulation and control of the industry, and will typically have involvement in the basic terms and conditions affecting the return to the industry. The revenue authorities typically will be involved in adjustments to the tax code and the general guidance of the government and the ministry or equivalent to encourage/discourage further investment by way of tax enhancements/disincentives.

To the extent that some countries have separated aspects of basic petroleum control and taxation into more than one or two groups, there has definitely been some reduction in effectiveness and there appears to be an increased likelihood of litigation.

The Legislative Dilemma

We must recognise the long time between encouraging exploration or reinvestment on the one hand and seeing the results in terms of taxation revenues in a remote and costly location on the other. This time gap makes it difficult for governments to establish a reasonable basis for judging the level of appropriate

benefits today as opposed to what one should encourage for a tomorrow which could be more than a decade away. While the oil industry is not unique in this regard, because much of it is so visible - it continues to present all legislators with very difficult choices.

The median view would seem to be to continue to encourage re-investment and development and exploration at the expense of current revenues to the extent necessary while reasonable prospects and opportunities appear to exist in the future. Industry itself provides the barometer of the reality of those opportunities since they are unlikely to invest even small percentages in a tax-efficient manner if the opportunities are indeed poor. To achieve this happy, and perhaps ideal mean, does require the government to have its own ongoing and reasonable analysis of prospects and opportunities and to be close enough to the industry to recognise their own driving forces and to encourage them accordingly.

As indicated in discussions with the Committee we are dealing with a worldwide industry and other opportunities will cause the limited capital resources to move away from one area to another. This will require governments of the day to adjust their revenue-sharing arrangements if they wish to continue to attract risk funds.

Similarly, from time to time it may well be that the existing structure, as we have seen in the U.K. and in other parts of the world, is no longer appropriate and it may be necessary to increase the tax share. Logically, how one treats the industry will be different if it forms a high proportion of government revenues, than how the industry is treated where it is but a small fraction. The principles may well be the same but the approach will be different.

Ideally from both governments' and industry's point of view a tax system which seeks to increase the state take as the project becomes more attractive, be it because of price, improved performance or whatever reason, is one that seems to find the most favour with all parties. Unfortunately, most systems are not even-handed in how they treat and encourage re-investment, development of marginal fields or encouragement of exploration, especially under lower oil price scenarios. However, it is fair to say that there is no panacea in defining legislation, for each country has particular circumstances which both require and justify somewhat different handling.